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EXAMINATION PAPERS, DECEMBER, 1884.

MATRICULATION.

MONDAY, 15TH DECEMBER, 10 A M TO 1 P M.

ENGLISH LANGUAGE.

I Paraphrase —

Sunset at Benares.

The shades of evening veil the lofty spires
Of Kasi's gilded shrines! A *twilight* haze
The calm scene shrouds. The weary boatmen raise
Along the dusky shore their crimson fires,
That tinge the *circling* groups. As day retires,
The lone and long-deserted maiden strays
By Gunga's stream, where float the feeble rays
Of her pale lamp—but lo! the light expires!
Alas! how cheerless now the mourner's *breast*,
For life hath not one charm. Her tears deplore
The fond youth's early doom, and never more
Shall Hope's sweet vision yield her *spirit* rest!
The cold wave quenched the flame, an *omen* dread,
The maiden dare not *question*—he is dead.

II (*a*) Name the part of speech, and state the construction of each of the italicised words in the above passage.

(*b*) Write down all the subordinate clauses in the above passage, stating of what kind each is, and giving its construction.

III. (*a*) State the part of speech of each of the following words according as the accent is on the first or second syllable:—

(1) Tórment, torménť.
(2) Cómpact, compáct.
(3) Fróquent, frequénť.

(*b*) Mark the accented syllables in *machinery, advertisement, monarch, gazette, formidable, inevitable, sufficiency, horizon.*

(*c*) Show the difference in meaning of the following:—

(1) *Council* and *counsel.*

(2) *Practise* and *practice.*

(3) *Feign* and *fain.*

IV (*a*) Write down the past tenses and past participles of the following verbs:—

Spin,	ride,	tread,
Cleave,	beseech,	weave.
Slay,	strive,	

(*b*) Give:—

(1) The singulars of:—*Indices, dice, kine, phenomena.*

(2) The plurals of:—*Grotto, Lord-justice, son-in-law, genus.*

(3) The feminines of:—*Actor, hero, nephew, man-servant.*

(4) The masculines of:—*Sow, witch, filly, heifer.*

V. Re-write the following sentences keeping their meaning but using the noun form of the italicised verbs:—

(1) I am not *acquainted* with him.

(2) The two boys *differ* greatly in disposition.

(3) By our ancient Saxon laws a thief *was punished* with death.

(4) He is *allowed* five rupees a month by his father.

VI. Make the required changes in the passages given below.—

(1) When he had refitted his ships, he set sail:—

Use the case absolute.

(2) He came in sight of the town before he had sailed ten leagues:—

Change the principal clause into the subordinate.

(3) Although they took every precaution they ran aground:—

Reduce this to a simple sentence.

(4) If you can prove this to my satisfaction, I will yield.—

Use the imperative.

VII. Write the following with all that is within marks of quotation turned into the indirect form, making any other change that may be needed:—

Meeting John yesterday, I said to him "Have you prepared the special lesson which your teacher prescribed last week"? He replied, "you must remember that I was absent from the class last week." "In that case," said I, "you should have asked your class-fellows, on your return to school, what lessons had been appointed." I added, "you should learn not only to do what you are ordered to do, but to think about your duty for yourself and to take pleasure in doing it."

VIII. Write the following sentences in correct English so as to convey the meaning intended:—

(1) When he was explained the matter, scarcely he was able not to laugh.

(2) Had not the king took to flight, the issue of the battle would be different.

(3) The Persians, seeing the danger in which their comrades had been, got up their horses, and after a great difficulty crossed through the river.

(4) He remembered them that rewards were within their reach and asked them that if they were not the happiest of men.

IX. Distinguish between:—

(1) I found the road *easy*,

and

I found the road *easily*.

(2) *Little* business was done at the meeting,

and

A little business was done at the meeting.

(3) I like my master better than *him*,

and

I like my master better than *he*.

X. From the following hints, write an account—not exceeding a page and a half,—of the destruction by fire of a native village.

A village—a small hut—fire—screams—no water—hot weather—wind—flames spread—all houses destroyed—helpless women—children—homeless—collector comes—relief—money—materials purchased—rebuild.

MONDAY, 15TH DECEMBER, 2 TO 5 P.M.

ENGLISH: TEXT BOOK.

I. Paraphrase the following passages so as to bring out the full meaning of each :—

(1) If countries we compare,
Though patriots flatter, still shall wisdom find
An equal portion dealt to all mankind.

(2) 'Twas vain, the loud waves lash'd the shore,
Return or aid preventing.

(3) Thus at the flaming forge of life
Our fortunes must be wrought.

(4) Standing on what too long we bore
With shoulders bent and downcast eyes,
We may discern—unseen before—
A path to higher destinies.

(5) Thou hast done a deed of daring
Had been perilled but by few.

II. (*a*) To what is reference made in each of the following?—

(1) Fearful lights that never beckon
Save when kings or heroes die.

(2) When to be a Scot was treason
And to side with Wallace crime.

(*b*) Explain the allusions in the words italicised in

(1) Here may be seen in bloodless pomp arrayed
The paste-board triumph and the cavalcade.

(2) Where lawns extend that scorn *Arcadian* pride.

(3) His little *Argo* sorely jeering.

(4) And the *Miserere's* singing
To the tolling of the bell.

III. (*a*) Give the meaning of :—

(1) gay theatric pride, (2) gestic lore, (3) adamantine

lips, (4) sulphurous canopy, (5) war-broken soldier, (6) whooping billow, (7) rattling shrouds, (8) couchant lions.

(*b*) Name the countries to which each of the following extracts from the Traveller refers :—

(1) A land of tyrants and a den of slaves.

(2) The land of scholars and the nurse of arms.

IV. Relate briefly the incident on which the poem of Napoleon and the young Sailor is founded.

V. (*a*) Name the figures of speech employed in the following extracts ; (*b*) Define the figures of speech thus named :—

(1) Thine freedom, thine the blessings pictured here.

(2) Where the bleak Swiss their stormy mansions tread.

(3) Their level life is but a smouldering fire.

(4) 'Twas when his banners at Boulogne
Arm'd in our island every freeman.

VI. Divide the lines of the following extracts into feet and mark the accented syllables :—

(1) But winter lingering chills the lap of May.

(2) Then shook the hills with thunder riven.

(3) Methought from the battle-field's dreadful array.

(4) Round him crush the people, crying.

VII. Write the following, making the changes indicated.

(1) The pensive exile.....
To stop too fearful, and too faint to go.
Change the infinitive phrases into clauses.

(2) Else, be sure, I had not brought it
From the field of dark despair.
Expand the word *else* into a clause.

(3) The young Czar now.....directed his whole efforts to the most extraordinary enterprise in which a sovereign ever engaged.
Use the comparative degree of *extraordinary*.

(4) It was not so much to reform them as to transform

them almost by main force, from barbarians into a civilized people.

Use the comparative degree of *much*.

(5) George Stephenson in the face of no little brow-beating from ignorant and interested opponents gave good evidence.

Substitute a clause for *in the face of*.

VIII. State the circumstances under which each of the following was spoken and give its meaning :—

(1) Industry is fortune's right hand and frugality her left.

(2) The remembrance of your noble countryman's kindness to me is as fresh and lively in my soul as those colours now appear to my eye.

IX. What were the means which Franklin used, when he first began to write, to improve his literary style ?

X. Write short notes explanatory of :—

(1) Wherever I could I got a set down.

(2) As soon as the coast was clear.

(3) The Socratic mode of disputation.

(4) Never making a St. Monday.

(5) As we played pretty equally we thus beat one another into that language.

(6) The nest-egg of his fortune.

(7) He was drawn for the militia.

(8) In their act of parliament they had taken power to employ steam in the traction of goods and passengers.

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

SANSKRIT. TEXT-BOOKS AND GRAMMAR.

I. (*a*) Re-write the following according to Sandhi, giving the rules of Sandhi which are to be observed—

मनस् + रथः, पुनः + रथः, ये + अगच्छन, गौरी + इह, अमी + इह, तत् + शास्त्रं.

(*b*) When is dental न् changed to lingual ण्.

II. (*a*) Give the second (Accusative) and sixth (Genitive) cases in all numbers of स्थाणु, स्वामिन्, स्वम्, भ्रातृ, गो, नौ, विद्वस्, महत् (only in the masculine gender) and हविस्.

(*b*) Decline the numerals त्रि, चतुर् and पञ्चन् in all cases and genders.

III. (*a*) Give the third person Singular, Dual and Plural of the Perfect (Liṭ), and Aorist (Luṅ) in the Parasmaipada and Ātmanepada of तुद्, चि, द्विष्, दुह्, and यज्.

(*b*) Give the meaning of and explain grammatically ब्रुवति, वशीर्यन्त, धर्षयिष्यन्ति, कर्तव्यं.

(*c*) Give the third person Singular Present (Lat) in the Causative of क्री, पा to protect, लभ्, हन्, ह्री.

IV. Explain briefly the six classes of compound-words giving examples of each.

V. Give the translation and analysis (Vigraha) of the compounds बहुरूपं, ऊनषोडशवर्षः, दृष्टापूर्तवधः, सहस्ररश्मिः, कृतोद्वाहम्, मित्रध्रुक्, प्रीतिदायं, दाक्षिणात्ये, मेधाविन्, निराशीभूतः

VI. Write short notes about Chāṇakya, Vṛitra, Krauncharipu, Ambikāsuta, Kauśika, Sarayū, Tāḍakā. Manthara.

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

SANSKRIT: TRANSLATION.

I. Translate as literally as you can:

(a) पिङ्गलकोपि तस्य पीनायतककुद्मतो नखकुलिशालंकृतं दक्षिणपाणिमुपरिदत्त्वा मानपुरस्सरमुवाच। अपि भवतः शिवम्? कुतस्त्वमस्मिन्वने विजने समायातोसि। तेनाप्यात्मवृत्तान्तः कथितः। यथा वर्धमानेन सह वियोगः संजातस्तया सर्वं निवेदितम्॥ तच्छ्रुत्वा पिङ्गलकः सादरं तमुवाच। वयस्य न भेतव्यम्। मद्भुजपंजरेण परिरक्षितेन यथेच्छं त्वयाधुना वर्त्तितव्यम्। अन्यच्च नित्यं मत्समीपवर्त्तिना भाव्यं यतःकारणाद्बहूपायं रौद्रसत्त्वनिषेवितं वनं गुरूणामपि सत्त्वानामसेव्यं कुतःशष्पभोजिनाम्॥

(b) (1) तृणानि भूमिरुदकं वाक्चतुर्थी च सूनृता।
सतामेतानि हर्म्येषु नोच्छिद्यन्ते कदाचन॥

(2) फलहीनं नृपं भृत्याः कुलीनमपिचोन्नतम्।
सन्त्यज्यान्यत्र गच्छन्ति शुष्कंवृक्षमिवाण्डजाः॥

(3) अन्तःसारैरकुटिलैरच्छिद्रैःसुपरीक्षितैः।
मन्त्रिभिर्धार्यतेराज्यं सुस्तम्भैरिव मन्दिरम्॥

(4) प्रजा न रक्षयेद्यस्तु राजा रक्षादिभिर्गुणैः।
अजागलस्तनस्येव तस्य राज्यंनिरर्थकम्॥

(5) यथा हि मलिनैर्वस्त्रैर्यत्रतत्रोपविश्यते।
एवं क्षलितवित्तस्तु वित्तशेषं न रक्षति॥

(6) उपकारिषु यःसाधुः साधुत्वे तस्य को गुणः।
अपकारिषु यःसाधुः स साधुस्सद्भिरुच्यते॥

(c) (1) तस्य रोषपरीतस्य विश्वामित्रस्य धीमतः।
चचाल वसुधा कृत्स्ना विवेश च भयं सुरान्॥

(2) तपोदमरताःसर्वे पुराणा ब्रह्मवादिनः।
निवसन्त्यत्र नियताः तपोनिर्धूतकल्मषाः॥

(3) नृशंसमनृशंसं वा प्रजारक्षणकारणात्।
पावनं वा सदोषं वा कर्त्तव्यं नात्र संशयः॥

(4) ततो मुनिवरःप्रीतस्ताडकावधतोषितः।
रामं मूर्धन्युपाघ्राय इदं वचनमब्रवीत्॥

(5) मुक्तशापं वनं तच्च तस्मिन्नेव तदाहनि।
रमणीयं विबभ्राज यथा चैत्ररथं वनं॥

(6) प्रियातु सीता रामस्य दाराः पितृकृता इति।
गुणाद्रूपगुणाच्चापि प्रीतिर्भूयोव्यवर्धत ॥

II. Translate into Sanskrit:

(a) A traveller once set out on a journey. When passing through a forest he saw a lion. The lion saw him and began slowly to follow him. When the traveller walked fast, the lion walked fast. When he stopped, the lion stopped. When he walked slowly, the lion walked slowly. He was not able to run away, for the lion could run faster than he. So he thought of a plan to cheat him.

(b) (1) This story moved him to tears.
(2) What woman is free from blame?
(3) High living leads to disease.
(4) He has an iron constitution.

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

LATIN: TEXT-BOOKS AND GRAMMAR.

I. In what does the conjugation of *deponent* verbs differ from that of *passive* verbs?
What verbs are called *semi-deponent*?
Do you know of any verbs having an active form and a passive meaning?

II. (a) Decline any one noun or pronoun; (b) compare any one adjective or adverb; and (c) give the present infinitive with the 1st person singular of the perfect indicative active of any one verb you may find in the following list:—

Atlas, opis, mulcet, celeriter, suum (not the possessive), quisquis, tunsæ, multi, sepsit, male, tonsis, pelago.

III. Express in Latin:—

(a) We shall go to Athens, from Athens to Italy, and we shall stay two months at Rome.

(b) Alexander-the-Great was taught philosophy by Aristotle, the most learned man among the Greeks.

(*c*) Lazy boys will repent of their laziness.

(*d*) Young Troïlus was no match for Achilles.

(*e*) Juno's resentment was no mystery to her brother Neptune.

IV. (*a*) Translate into English; (*b*) account for the grammatical construction of the words in italics:—

(i) O *Danaum* fortissime gentis
Tydide, mene Iliacis *occumbere* campis
Non *potuisse*, tuaque animam hanc effundere dextra!

(ii) Tu faciem illius *noctem* non amplius unam
Falle dolo, et notos pueri *puer* indue vultus.

(iii) Haud, credo, invisus cœlestibus auras
Vitales carpis, Tyriam qui *adveneris* urbem.

(iv) Prima *luce*, productis omnibus *copiis*, duplici acie instituta, auxiliis in mediam *aciem* conjectis, quid hostes *consilii caperent*, expectabat.

(v) Nostri primo integris viribus fortiter *repugnare*, neque ullum frustra telum ex loco superiore *mittere*.

V. Re-write the following extracts, making, 1st, the changes that are indicated; 2nd, only any other alterations that such changes may render necessary:—

(*a*) Sabinus suos hortatus cupientibus signum dat.—Use *datur*.

(*b*) Implevitque mero pateram, quam Belus et omnes A Belo soliti.—Supply the ellipsis.

(*c*) Conclamant omnes occasionem negotii bene gerendi omittendam non esse.—Turn the indirect narration into direct narration.

(*d*) Huic magnis præmiis pollicitationibusque persuadet uti ad hostes transeat, et quid fieri velit edocet.—Use past instead of present tense.

(*e*) Pugnatum est diu atque acriter.—Use the superlative.

(*f*) Argentum Pariusve lapis circumdatur auro.—Make the last word the nominative of the sentence.

VI. Explain the allusions in—

(*a*) Navibus, infandum! amissis unius ob iram
Prodimur.

(*b*) Non ignara mali miseris succurrere disco.

(*c*) Domus Assaraci Phthiam clarasque Mycenas servitio premet.

(*d*) Dictis respondent cætera matris.

VII. The following contain constructions that are unusual or foreign to Latin Syntax; point them out, and substitute more regular modes of expression:—

(*a*) Tum celerare fugam patriaque excedere suadet.

(*b*) Urbem, quam statuo, vestra est.

(*c*) Non nos aut ferro Lybicos populare penates
Venimus, aut raptas ad litora vertere prædas.

(*d*) Expleri mentem nequit, ardescitque tuendo
Phœnissa.

VIII. Give—(*a*) The derivation of—

Remigium, fulmen, tribunus, iniquus, funalia.

(*b*) An adjective formed from each of the following words:—

Hiems, humus, nimbus, crista, Ceres, cruor, nix.

(*c*) The difference in meaning between—

Cruor and *sanguis*; *litus* and *ripa*; *auxilium* and *auxilia*; *collum* and *cervix*; *claudo* and *recludo*; *minimum* and *quam minimum*.

IX. (*a*) Describe the structure of the Hexameter verse.

(*b*) Scan the following lines:—

Troes te miseri, ventis maria omnia vecti,
Oramus: prohibe infandos a navibus ignes;
Parce pio generi, et propius res aspice nostras.

X. (*a*) Write short explanatory notes on—

Vineæ, gæsa, soldurii, Sontiates, porta decumana, fatum, cana Fides.

(*b*) What facts or scenes did Æneas and Achates witness while they were hidden in the mist spread around them by Venus?

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

LATIN: TRANSLATION.

I. Translate into English:

(i) Talia jactanti stridens Aquilone procella
Velum adversa ferit, fluctusque ad sidera tollit.
Franguntur remi; tum proia avertit, et undis
Dat latus; insequitur cumulo præruptus aquæ mons.
Hi summo in fluctu pendent; his unda dehiscens
Terram inter fluctus aperit; furit æstus arenis.
Tres Notus abreptas in saxa latentia torquet—
Saxa vocant Itali mediis quæ in fluctibus Aras—
Dorsum immane mari summo; tres Eurus ab alto
In brevia et syrtes urget, miserabile visu,
Illiditque vadis atque aggere cingit arenæ.
Unam, quæ Lycios fidumque vehebat Oronten,
Ipsius ante oculos ingens a vertice pontus
In puppim ferit: excutitur pronusque magister
Volvitur in caput; ast illam ter fluctus ibidem
Torquet agens circum, et rapidus vorat æquore vertex.
Apparent rari nantes in gurgite vasto,
Arma virum, tabulæque, et Troia gaza per undas
Jam validam Ilionei navem, jam fortis Achatæ,
Et qua vectus Abas, et qua grandævus Aletes,
Vicit hiems; laxis laterum compagibus omnes
Accipiunt inimicum imbrem, rimisque fatiscunt.

(ii) Tum sic reginam alloquitur, cunctisque repente
Inprovisus ait: Coram, quem quæritis, adsum,
Troius Æneas, Libycis ereptus ab undis.
O sola infandos Troiæ miserata labores,
Quæ nos, reliquias Danaum, terræque marisque
Omnibus exhaustos jam casibus, omnium egenos
Urbe, domo, socias, grates persolvere dignas
Non opis est nostræ, Dido, nec quidquid ubique est
Gentis Dardaniæ, magnum quæ sparsa per orbem.
Di tibi, si qua pios respectant numina, si quid
Usquam justitia est et mens sibi conscia recti
Præmia digna ferant.

(iii) Hujus est civitatis longe amplissima auctoritas omnis oræ maritimæ regionum earum, quod et naves habent Veneti plurimas,

quibus in Britanniam navigare consuerunt, et scientia atque usu nauticarum rerum reliquos antecedunt, et in magno impetu maris atque aperto, paucis portibus interjectis, quos tenent ipsi, omnes fere, qui eo mari uti consuerunt, habent vectigales. Ab his fit initium retinendi Silii atque Velanii, quod per eos suos se obsides, quos Crasso dedissent, recuperaturos existimabant.

(iv) Atque in ea re omnium nostrorum intentis animis, alia ex parte oppidi Adiatunus, qui summam imperii tenebat, cum sexcentis devotis, quos illi soldurios appellant, quorum hæc est conditio, ut omnibus in vita commodis una cum his fruantur quorum se amicitiæ dediderint, si quid his per vim accidat, aut eundem casum una ferant, aut sibi mortem consciscant; neque adhuc hominum memoria repertus est quisquam, qui, eo interfecto, cujus se amicitiæ devovisset, mori recusaret: cum his Adiatunus eruptionem facere conatus, clamore ab ea parte munitionis sublato, cum ad arma milites concurrissent, vehementerque ibi pugnatum esset, repulsus in oppidum, tamen uti eadem deditionis conditione uteretur, ab Crasso impetravit.

(v) (Not from text-books)

Interim certior factus Publius Sulla, quem discedens castris præfecerat Cæsar, auxilio cohorti venit cum legionibus duabus: cujus adventu facile sunt repulsi Pompeiani. Neque vero conspectum aut impetum nostrorum tulerunt: primisque dejectis, reliqui se verterunt, et loco cesserunt. Sed insequentes nostros, ne longius prosequerentur, Sulla revocavit. Ac plerique existimant, si acrius insequi voluisset, bellum eo die potuisse finiri. Cujus consilium reprehendendum non videtur; aliæ enim sunt legati partes, aliæ imperatoris.

II. Translate into Latin prose:—

Boiorix, King of the Cimbri, came now with a small troop of horse to the Roman camp, and challenged Marius to appoint the time and place where they should meet and decide by arms to whom the country should belong. Marius answered, "That the Romans never consulted their enemies as to when they should fight; however he would indulge the Cimbri in this." Accordingly they agreed to fight the third day after, and that the plain of Vercellæ should be the field of battle.

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

ARABIC: TEXT-BOOKS AND GRAMMAR.

I. Give the meaning in English of—

(a) فارة - كُمّ - قيان - سرج - اعوجاج - الية -
فضّة - سُنبلة - لاأبالي - نتف الرّيش - كحلّ العقال - بغال
قفار - تشوية - بيّنة - ترجمان *

(b) * إذا - الآن - الي حيث - اين - حينئذٍ - لِكي كذلك

II. How do you distinguish between the various cases of nouns?

III Write the تعليل of—

قال - قُلن - يبيع - يرمي - قُل *

IV Give the exact force of the following verbal forms:—

إفعال - تفعيل - مفاعلة - استفعال *

V. Write out—

(a) The relative pronoun in both genders.

(b) The demonstrative pronoun, masculine and feminine.

(c) Six forms of broken plurals (جمع المكسر)

VI. How are the following formed:—

مضارع - امر - اسم فاعل - اسم مفعول - اسم ظرف
اسم آلة - افعل التفضيل *

VII. Write the following numbers in words and in both genders:—

1, 2, 3, 4, 11, 101, 1884.

VIII. Write the third person singular, past and present, and in both genders of—

قال - رمي - وعد - نصر

IX. State clearly the way in which the subjunctive mood is formed in Arabic.

X Re-write the following with the correct short vowels —

قيل ان نوشيروان وضع الموائد للناس في يوم نيروز و جلس و دخل وجوه مملكته الايوان *

XI. Re-write the following words, substituting singular for plural forms, and plural for singular.—

سنانير - جاريه - خطوات - عصفور - رِجل - رَجُل
مياه - ليل *

XII. Explain the difference between—

(1) اِبنٌ للملك and اِبن الملك

(2) هَرَبْتُ خَوْفَ القتل and هَرَبْتُ لِخوفِ القتل

(3) Translate each sentence into English.

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

ARABIC: TRANSLATION.

I. Translate into Arabic:—

(a) It is said that a careless man passed by (اجتار) a high minaret. Three men were there. One of them said, "How tall the builders of the former times were, who could reach up to the top of this minaret." The second said, "O! fool, they made it on the ground, and then raised it up." The third man said, "Oh! you two ignorant ones, this was a well, and it was turned into a minaret."

(b) They say a guest came to a miser, who placed before him bread and a cup of honey. The guest took some bread and wished to take some honey also. The miser thought that the guest would not eat honey without bread, and so he said, "Do you like to eat honey without bread." He replied, "Yes," and began to lick up (علق) the honey. The miser then said, "I swear by Allah, O! my brother, honey

burns the heart." The guest replied, "'True, but it is thy heart which burns."

II. Translate into English :—

(a) قيل اِصْطَحَبَ اَسدٌ و ثعلبٌ و ذئبٌ - فخرجوا يصيدُون فصادُوا حماراً وظبياً وارنباً - فقال الاسدُ للذّئب اقسم بيننا صيدنَا - فقال الحمارُ لكَ والارنب للثعلب والظبي لي - فخَلَبه الاسدُ فاَخرج عينَه - فقال الثعلبُ قاتَلَه اللّهُ ما اَجهلَه بالقسمةِ - فقال الاسدُ هاتِ انتِ يا ابا معاية فاقسم - فقال يا ابا الحارث الامرُ اَوضحُ مِن ذلك - الحمارُ لغِدائك والظّبيُ لعشائك و تَخَلَّلْ بالارنب فيما بين ذلك - فقال الاسدُ قاتَلَكِ اللّهُ ما اقضاكِ مِن اين تَعَلَّمتِ هذا - قال مِن عَين الذِئْب *

(b) فلمّا كان اَيام سليمان بن داوُد عليه السلام وشيَّدَ اللّه ملكه و سخّرَلَهُ الجنّ و الشياطين و غلبَ سليمانُ علي ملوكِ الارض افتخرتِ الجنُّ عَلَي الانس بانّ ذلك مِن معاونةِ الجنِّ السيمانَ و قالت لولا مُعاونةُ الجنّ لِسليمانَ لكان حكمهُ حُكم احد ملوك بنى اٰدم - وكانت الجُن توهِم الانسَ انّها تَعلم الغيبَ ولمّا مات سليمانُ و الجنُّ كانوا فى العذاب

المُهين ولم يشعروا بموته فتبيَّنَ للإنس انها لوكانت
تعلمُ الغيبَ مالَبِثتْ في العذاب المهين - وايضا
لمَّا جاء الهدهدُ بخبرِ بلقيس و قال سليمان للملاء
الجن والانس ايكم ياتيني بعرشها قبلَ اَن ياتوني
مُسلمين افتخرتِ الجنُّ وقال عِفريتٌ منها انا
اٰتيك بـه قبل اَن تقومَ مِن مقامك وهو اصطوس
بن ايوان قال سليمان أُريدُ اَسرَعَ من ذلك - فقال
الذي عنده علمٌ من الكتاب وهو اٰصف بن برخيا
اَنَا اٰتيك به قبل اَن يرتدَّ اليك طَرفُك - فلمَّا
رَاٰهُ مستقرّاً عنده خرَّ سليمانُ ساجداللّٰه حين تبين
فضل الانس علي الجن وانقضي المجلس وانصرفت
الجنُّ مِن هناك خَجلين مُنكسين رؤسهم وغوغاء
الانس يُطَقْطِقون في اثرهم و يسعّقون خلفهم
شامتين بِهم *

(c) الحُرُّ عبد اذا طَمِعَ والعبد حرٌّ اذا قنع - الحسدُ داءٌ
لا يُبرءُ - السعيدُ مَن وُعِظ بغيره - زرغبّاً تزدَدْ حبّاً -
اصـ مفتاحُ الفرج *

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

PERSIAN: TEXT-BOOKS AND GRAMMAR.

I. Give a short تذکره of Jámi.

II. How are the following formed? Give examples.

اسم حالیه — متعدی بالواسطه — حاصل بالمصدر —
اسم تصغیر — اسم صفت — جمع فارسي - مجهول —
اسم منسوب *

III. (a) Give the English meaning of—

قرطاس — کزلك — تعاقب کردن — آسیا —
طارف وتلیل — دخل — سرگوشي نمودن — امر صعب -
مایحتاج — جار چیان — یمن — مشروبات — تاک —
تمثال — مقارن این حال — سبد *

(b) the singular forms of—

آزادگان — مه رویان — نوشتها — مژگان —
اِخوان — اعدا — افواه — فِرَق *

(c) the plurals of—

معدن — حیله — چِه — شما — ما — طائر —
خاطر — لحم *

IV. Re-write the following in idiomatic Persian:—

اسپ را گذاشتم — او را در باورچي خانه نگاهدارید -
این درس او را یاد دانید — پاي او آماسیده است —
آبلهٔ شما شکسته است یا نه — مرغ بیضه داد — بوقت
پنج ساعت بیا — روزے گذاشته روز دیگر بیا *

V. Explain in English—

(a) شیر گفت او را بمیزان داد باید سپرد *

(b) پیش از آنکه دشمن فرصت چاشت یابد براي او
شامي آماده گرداند *

(c) چشیدن همان بود و جان شیرین دادن همان *

(d) برادر پادشاه بنقد منت دلش شادمان ساخت *

(e) راه آمد و شد از غبار اغیار صافي شده بود *

VI. * اي برادر گرت خطائي رفت *
* متمسک مشو بعذر دروغ *
* کان دروغت بود خطاي دگر *
* که برد از تو بار دیگر فروغ *

(a) Re-write the above in a simple prose style.

(b) Analyse the two couplets.

VII. Write briefly in simple Persian any one of the following stories :—

پادشاه دادگر — کژدم و سنگ پشت — دراز گوش
که طلب دم کرد — کور و بینا — گفتگوي باز با مرغ
خانگي *

VIII. Form Persian sentences with—

اعتراف نمودن — درخور — پیروي کردن —
متدین — منشا — رخت — از انجا که — سعادت *

IX. Define and illustrate—

نائب فاعل — جملهٔ خبریه — مرجع — مهمله —
فوق النقاط — تجنیس تام — مسجع — تضاد *

X. Place the short vowels to ب in — (take) بگیر — (carry)
بکش (kill) — بکش (pull) ببر (cut down) — ببر

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

PERSIAN: TRANSLATION.

I. Translate into Persian:—

(a) In the year A.H. 32, the Turks on the western shore of the Caspian gained a victory in which the Arab leaders and a great body of the veterans were slain. To retrieve the disaster, Othman ordered levies from Syria to cross Mesopotamia and reinforce the Kufan army. The two parties began to quarrel; the Syrians refused to serve under the Captain of the rival body; and an altercation ensued which nearly led to bloodshed. This, adds the historian, was the first symptom of the breach between the Kufans and the men of Syria, which subsequently broke out into prolonged hostilities. About the same time, a whole army was lost in deep snow upon the heights of Kirman, only two men escaping to tell the tale. There were also serious reverses in Turkestan. But Arabia continued to send forth large numbers of fighting men, courageous and fanatical, and so these disasters soon disappeared in the swelling tide of conquest.

(b) (1) He is not very well.
(2) Send a telegram.
(3) Tell him to come every other day.
(4) Who carries on your business?

II. Translate into English:—

(a) * سیمین ذقنا سنگ دلا ساده عذا را *
* خوش کن به نگاهے دل غم پرور ما را *
* این قالب فرسوده گر از کوي تو دوراست *
* القلب علي بابک لیلا و نها را *
* آزرده مبادا که شود آن تن نازک *
* از بهر خُدا چست مکن بند قبا را *
* چون برگذرم از سر کوي تو که آنجا *
* یارای گذشتن نبود باد صبا را *
* گرهست جومجمر نفسم گرم عجب نیست *

* اذ حبک قد اوقد في قلبي نا را *
* جامی نکند جز هوس بزم تو لیکن *
* در حضرت سلطان که دهد راه گدا را *

(b) کلیله گفت که باغباني بود از ناداني بخرس دوستي کرده - خرس نیز مهربا ني دریافته بآن دهقان الفتي پیدا کرده بود تا آنکه چون باغبان بخواب رفتي بربالین او آمده مگس از روي وی مي راند - روزي باغبان خواب کرده بود و مگس بسیار بروي او فراهم آمده خرس بدستور خود آمده مگس راني آغاز کرد و هر چند مگسان را از طرفي مي راند از جانب دیگر جمع مي شدند - خرس ازین آشفته شد و سنگي برداشت بخیال آنکه مگسان را خواهم کشت بر روي دهقان بیچاره انداخت تا سر بیچاره بخاک برابر شد *

(c) زید ساعت خود را کوک کرد - اگر گرم باشید لخت بشوید - چون هوا قدري احتیاط داشت تعجیل در حرکت بهتر مي نمود - چند روز ست که او را ندیدهٔ - اگر فردا ازین سمت عبور کني مرا ملاقات کن والا خیر - در را چفت بکن *

(d) شخصي دعوي نبوّت کرد او را نزد مامون رشید آوردند - مامون از قیافه اش دریافت که در حال گرسنگي و اضطرار چنین کرده است فرمود که او را در آشپز خانه نگاهدارند و هر چه مرغوب خاطرش باشد بدهند - بعد از چندي خلیفه او را طلبید

و استفسار نمود که الحال هم وحي مي آيد - گفت
بلي همين که تا ممکن باشد از مطبخ خليفه بيرون
نرو - خليفه بخنديد و او را روزانه مقرر فرمود *

(e) آدمي تا در طلب دنيا نيست از همه آزاد است
چنانچه کبوتري که طمع دانه ندارد فارغ از جور
دام صيّاد است * (مثنوي) * آدمي را که ميل
دنيا نيست * با کس او را نزاع و دعوي نيست *
* مرغ را تا هوا ي دانه نشد * تير صيّاد را نشانه
نشد *

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

URDU: TEXT-BOOKS AND GRAMMAR.

I. هر ايک لفظ ذيل کي معني انگريزي مين رقم کرو *
بسنت - نرگس بيمار - واشد هونا - في الجمله - ناوک -
چين بجبين هونا - شاه نجف - نيو - بهلاوا دينا - تسخير
جنات - کلائي - هيله مارنا - سمک - ربيع - نخاس کا
بازار - موالید ثلثه *

II. ايک جمله لکهو جس مين مفعول به مفعول فيه
مفعول له اور تميز هون *

III. (ا) ابيات مرقومة الذيل کي شرح سليس عبارت
مين تحرير کرو *

* هم زبان شمع سے جلتے هين هجر يار مين *
* چاهئے گهل گهل کے مرنا عشق کے آزار مين *

* میرے دل مین ہي غم خال و خط جانان سے داغ *
* مشک بھي تھوڑا چھڑک د و مرھم زنگار مین *
* کور گو انکھین ھوئین رونا ھو کم ممکن نہین *
* ھوتي ھي اکثر سفیدي ا بر د ریا بار مین *
* جو کہ ھین خون خواران کو رنج دنیا مین نہین *
* خندہ ھي موجود جب دیکھو لب سوفار مین *

(ب) کسي ایک مصرعۂ بالا کي تقطیع کرو *

(ج) پہلي بیت کی ترکیب کیجئے *

IV. ان مثالون مین ب - ا - و - ي - بے - نہ - کا - سا - کس لئے آئے ہین *

در بدر - لبالب - گفت و گو - راتے رات - گاہ بیگاہ - کچھہ نہ کچھہ - کھیت کا کھیت - تھوڑا سا *

V. ھر ایک مرقوم الذیل کے کل اقسام معۂ امثلہ مجملا لکھو *

معرفہ - مرکب ناقص - اضافت - اصل جملہ - مجاز - دلالت - مستثنیٰ -- اسم اشارہ *

VI. ان کو کیسا بناتے ہین *

مستقبل - ماضي مطلق - اسم فاعل - ماضي متشکي - ماضي استمراري - امر تعظیمي - فعل معطوف - امر *

VII. ان کی تعریف معۂ مثال رقم کرو *

مجہول -- فعل -- مصدر -- اسم منصرف -- تشبیہ - قلب کل - تصحیف - مذھب فقھي *

VIII. مرقوم الذیل اشخاص کون تھے اور ان کے معشوقون کے نام کیا ھین *

رانجھا -- فرھاد - زلیخا -- مجنون -- خسرو *

IX. الفاظ ذیل اکثر کس کی صفت واقع ھوتے ھین *

ناب -- ژیان - شرزہ - دمان -- زلال *

X نیچے مندرج ھین سو شاعرون مین سے کسي ایک کا تذکرہ (حال) بطور اجمال لکھو *

جرات - سودا - ناسخ -- درد - انشا -- میر تقي - مصحفي - ظفر - سوز - غالب *

XI. شعرا تاریخ گوئي مین ھر ایک حرف ذیل کو کس عدد کے جاے مین شمار کرتے ھیں *

ش - ط - ض - ع - ف - ک - م - و - ث - ت *

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

URDU. TRANSLATION AND COMPOSITION.

I. Translate into Urdu :—

King Harold had a rebel brother who was a vassal of the King of Norway. This brother and this Norwegian King, joining their forces against England, with Duke William's help, won a fight, and then besieged York. Harold, who was waiting for the Normans on the coast of Hastings, marched with his army to give them instant battle.

He found them drawn up in a hollow circle, marked out by their shining spears. Riding round this circle at a distance, to survey it, he saw a brave figure on horseback, in a blue mantle and a bright helmet, whose horse suddenly stumbled and threw him.

"Who is that man who has fallen?" Harold asked one of his captains.

"The King of Norway," he replied.

"He is a tall and stately King," said Harold; "but his end is near." He added, in a little while, "Go yonder to my brother and tell him, if he withdraw his troops, he shall be Earl of Northumberland and rich and powerful in England."

The captain rode away and gave the message.

"What will he give to my friend, the King of Norway?" asked the brother.

"Seven feet of earth for a grave," replied the captain?

"No more?" returned the brother, with a smile.

"The King of Norway being a tall man, perhaps a little more," replied the captain.

"Ride back," said the brother, "and tell King Harold to make ready for the fight."

He did so very soon. And such a fight King Harold led against that force that his brother, the Norwegian King, and every chief of note in all their host, except the Norwegian King's son, to whom he gave honorable dismissal, were left dead upon the field.

II. Subject of a short Essay in Urdu:

The force of example for good or evil: (اپني رويه سے کسی
کي بدی يا نيکي کی تاثير کي قوت)

III. Translate into English:—

(a) * هيگا جو ناز و ادا اس بت لاثاني مين *
* ايک بهی بات نه تهي يوسف کنعاني مين *
* عشق مين ديتا هون اس ليلي کے کاوش جان کو *
* دسترس هی يهه کهان قيس بياباني مين *
* چرخ نے پنبهٔ مهتاب کو کانون مين ديا *
* شورش يان تک هي ميرے اشک کي طغياني مين *
* جان مردون کی پهری لب سے جو نکلے دشنام *
* کيا مسيحائي هی اس لعل بدخشاني مين *

* کار شمشیر کا کرتا هي خیال ابرو کا *
* داغ اس کا هي ازل سے میري پیشاني مین *
* پهن کر هو ویگا خوش حال دوشاله کوئي *
* هم بهي هین شاد اي غالب اسی عریاني مین *

(b) کالپي ایک شهر هي جمنا کے کنارے - بهت سے صاحب کمال درویش اس سر زمین بهي آسوده هین ساتهه اس کے مشهور هي که بهیم کے تودے کے غار مین فیروزے اور تانبے کے کهان هي لیکن مداخل و مخارج اس کے برابر هین - پر گرمي اپنے موسم مین وهان حد سے زیاده بڑهتي هي یهان تک که اسي کے اطراف مین بیشتر باد سموم چلتي هي - اکثر راه رو اس کی حدت سے تونس کر اذیت پاتے هیں بلکه بعضے تو مرهي جاتے هین - اِسي ڈر سے وهان کے باشندے اس رت مین بیشتر گهرون مین بیٹهے رهتے هین پهرتے چلتے نهین - مگر بضرورت گرمي کا وقت ٹال کر - مصري بهي وهان کي بلاد هند مین مشهور هي *

(c) دوسرا فقیر بولا که بنده شاهزادهٔ عجم اور صاحب جاه و حشم مالک خزانه مختار کارخانه هي - باپ کا بهي بنده ایک فرزند رگ جان کا پیوند - ایک روز مین بارادهٔ شکار سوار هوا - صحن صحرا فرش زمردین سے آراسته اور رسته خس و خار سے پیراسته

تها - ناگاه ایک آهو مشکیں مو با زیور طلائي بصد
زیبائي نظر آیا - مئین نے یارون سے فرمایا کوئي
میرا تعاقب نکرے - مئین خود جاتا هون زنده
اسیر کر لاتا هون - بس گهوڑا خیز کیا اور آهو نے
گریز - مئین جب اس کے سر پر گیا وه صحرا کو
ایک چوکڑي بهر گیا تا دو پهر هاتهه نه آیا گهوڑا تین
عرق لایا ناچار ایک تیر اس نخچیر کے ران مین زور
بازو سے ترازو کیا *

(d) بلبل قصه گو یهه درخت کي شاخ پر بیٹهي هوئي هي
جس کا چهوٹا سا جسم هي - ازنے مین تیز
رخسارون کا رنگ سفید - هر وقت داهنے بائین
متوجه رهتي هي نهایت فصاحت اور خوش الحاني
سے نغمه سرائي کرتي هي - باغون مین انسانون کے
ساتهه هم جلسه هوتي هي بلکه ان کے گهرون مین
جاکر ان سے همکلام هوتي هي - بعد اس کے کهتي
هي الهي مجهه کو لڑکون کي حرص اور تمام
حیوانون کے شر سے محفوظ رکهه *

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

TAMIL: TEXT-BOOKS AND GRAMMAR.

I. (a) "கம்பராமாயணக் கருப்பொருள்" என்றால் அாததமென்ன? "ராமாயணம்", "கருப்பொருள்" என்பனவற்றைப் பிரித்து இலக்கணங்கூறுக.

(b) "நீதிநெறி விளக்கம்" இதற்குப் பதவுரை எழுதுக?

இன்னூலைச்செய்தவர் யார்? இவர்செய்த வேறிரண்டு நூல்களைத்தெரிவிக்க.

II. அடியில் வருஞ் செய்யுட்களுக்குப் பொழிப்புரையெழுதுக :—

(a) ஆனமாயைகண் டறிந்துவந் தரக்கர்கோ னுரைத்தான்
வானரேசனு மிளவலும் வடதரு நீழற்
சேனைசூழ்தர நிகும்பலை வேள்வியைச் சிதைத்தார்
போனபோதில்வந் திந்திர சித்தமர் புரிந்தான்.

(b) மானவ னறிந்தருண் மதுரமாமணி
சானகி யளித்தனள் விடையுந்தந்தபின்
யானிவண் வந்துவீ ணேகறீதெனப்
போனமா மாருதி பொழிலைவாட்டினன்.

(c) சிற்றின்பஞ் சின்னீர தாயினு மஃதுற்றார்
மற்றின்பம் யாவையுங் கைவிடுப - முற்றுந்தாம்
பேரின்ப மாக்கட லாடுவார் வீழ்பவோ
பாரின்பப் பாழ்ங்கும்பியில்.

(d) பொய்குறளை வன்சொல் பயனிலவென் றிந்நான்கும்
எய்தாமை சொல்லின் வழுக்காது - மெய்யில்
புலமைந்துங்காத்து மனமாசகற்றும்
நலமன்றே நல்லாறெனல்.

III. மேல்பாட்டுகளில்,

(a) 1. அரக்கர்கோன், வானரேசன், இளவல்;— இவர் யாவர்?

2. "வானரேசன்" இது என்ன சந்தி? பிரித்துக்காட்டி இவ்வகைச் சந்திக்கு வேறு நான்கு உதாரணங்களெழுதுக.

3. "வடதரு" இதற் கிலக்கணங்கூறுக.

(b) 1. சானகி, மாருதி, இவர்கள் யாவர்? இவர்களுக் கிப்பெயர்கள் எப்படி யமைந்தன?

2. "வீணேகறீதெனு" இதைப்பிரித்து நன்னூற்சூத்திரத்தோடிலக்கணங் கூறுக.

(c) 1. இப்பாட்டிலுள்ள உம்மைகளின் பொருள்களெவை?

2. எழுவாய் பயனிலை செயப்படுபொருள்களை யெடுத்துக்காட்டுக.

3. மற்றின்பம், இதைப் பிரித்து இலக்கணங் கூறுக.

4. காத்து:—இதற்குப் பகுதியென்ன? அப்பகுதியிலிருந்துண்டான வினை யெச்சங்களை விவரித்துக் காட்டுக.

(d) 1. "புலமைந்தும்" இவை யெவை?

2. குறளை, நல்லாறு, இவற்றிற் கர்த்தமெழுதுக.

3. எய்தாமை, என்பதில் மை விகுதி எதைக் காட்டும்?

IV. சுடுசரம், பாசறை, மிதிலை, மந்தரம், இவை யென்ன?

V. (a) வேலைவேந்தன், புரந்தரன், மாதலி, மோதரன், அயோமுகி, துந்துபி, வசந்தன், மயன் இவர்கள் யார்?

(b) ஆர்னல்ட், ஸ்ரீஜான்ஸின்க்லயர், ப்ராங்க்லின், உவெலிங்தன் டியூக், ஸ்ரீ சார்லஸ் நேப்பியர்:—இவர்களைப்பற்றி நீ அறிந்ததைச் சுருக்கமாயெழுதுக.

VI. ஜனம், ஜயம், மானம், சரீரி, களங்கம், சாரம், இவற்றிற்கு எதிர்மறைப்பொருள் தரும் பதங்களெவை?

VII எதனால் பிரமதேவன் தமிழ வித்துவான்களுககுச் சமானமாகமாட்டான் என்று நீதிநெறி விளக்கத்திற செப்பியிருக்கிறது ?

VIII. உரல், உறல் ; உரம், உறம் ; திரை, திறை ; கோரல், கோறல் ; உளைந்து, உறைந்து ; செத்து, செறறு ; சுத்தம், சுற்றம் ; இவற்றிற்கு அர்த்த பேதத்தைக் காட்டுக.

IX. (a) மனிதரோடு உறவாடியதனால் விளைந்த பயனைப்பற்றிப் பிரான்ஸிஸ் ஹார்னர் என்ன சொல்லி யிருக்கிறார் ?

(b) எர்ஸ்கின் பிரபு அனுசரித்த ஆசாரக்கிரமங்கள் எவை ?

(c) சொல்லிலும் செயலிலும் எதை யோக்கியதைக்கு முதகெலும்பாகச் சொல்லியிருக்கிறது ?

X. "ஒரு தேசத்தை உயர்த்துவதும், ஒரு தேசத்தைப பலப்படுத்துவதும், ஒரு தேசத்திற்கு மகத்துவம் உண்டாக்குவதும், அதன் அதிகாரத்தைப் பரப்பி அதற்குச் செல்வாக்கு உண்டாகப் பிறர் அதற்கு அடங்கி அதை அபிமானிக்கும்படி செய்வதும், இலக்ஷாதி லக்ஷம் பெயருடைய இதயத்தை வணக்கி அதற்குமுன் இதர தேசத்தார்கள் கருவம் அடங்கித் தலைவணங்கும்படி செய்வதும், ஒருதேசத்தார்கு மெய்யான சிங்காதனம், கிரீடம், செங்கோல் ஆகிய இவைகளை விளைவிப்பதும், ஒருவருடைய குலபபெருமையுமல்ல ; நாகரிகப பெருமையுமல்ல ; புத்தி விவேகங்களின் திறமைமாத்திரமுமல்ல ; பின்னென்னவெனில், நல்லொழுக்கமாகிய யோக்கியதையின் பெருமையேயாம்."

மேல் வாக்கியத்தைச் சுலபமான நடையில் உன் சொந்த வார்த்தைகளால் "ஒருவருடைய குலப்பெருமையாலும்" என்று ஆரம்பித்து எழுதுக.

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

TAMIL: TRANSLATION AND COMPOSITION.

I. Translate into Tamil—[See Urdu Translation paper, p. xxxi.]

II. Subject of a short Essay in Tamil :—

The force of example for good or evil. (நடதத்திக்காடும் நிதர்சனதத்திற்கு நனமையையாவது தீமையையாவது விளைவிக்கும் சக்தியுண்டு.)

III. Translate into English :—

(a) வாழ்நாளை மிகவும் சிறப்பிக்கின்ற நீதி நல்லொழுககங்களும், மட்டுமரியாதைகளும், அவைகளை விளக்கும் அடையாளமாகிய சட்டதிட்டங்களைப் பார்ககிலும் மிக முக்கியமானவைகளாம். ஏனெனில் சட்டதிட்டங்கள ஒவ்வொரு தருணங்களில்மாத்திரமே நமககு நினைப்பூட்டும்; நல்லொழுக்கங்களோ அபபடியன்றி எங்கும் நம்மைச் சூழந்துகொண்டு நாம் உச்வாஸ நிச்வாஸம செய்யும் வாயுவைப்போல் நம்மோடுகூடவே யிருக்கின்றன. மரியாதையாவது தாக்ஷிணியமும் தயையும் சேர்ந்திருக்கப் பெறறு நல்லொழுக்கத்தோடு முற்றும் ஒத்திருக்கின்றது. மனிதர் ஒருவரோடொருவா இனபமாய அனபோடு கூடிக் கலநதுகொண்டாடும் எவ்வகைக் கொண்டாட்டதிலும் மேலானது பரோபகார குணமாம். "உபசாரத்திற்குச் செல்லும் செலவு ஒன்றுமில்லை, அதைக் கொடுத்து அனைத்தும் வாங்கலாம்," என மாநதேக்கு என்னும் பெருமாட்டி மொழிந்தாள். தயையானது எல்லாபபொருள்களிலும் மிகவும் நயமான பொருளாம். தயைபுரிவ தொல்லையுமல்ல, அதனால் நஷ்டமுமில்லை.

(b) மறைவழிபட்ட பழிமொழி தெய்வம்
பறையறைந்தாங் கோடிப்பரக்கும் - கழி
முடைப்
புன்புலாலுற்றம் புறம்பொதிந்து மூடினும்
சென்றுதைக்குஞ் சேயார் முகத்து.

(c) மயன்மகள் வந்துமாய்ந்தாள் வருகவென்றி
ராமவேநதன்
புயவலி நிருதன்கூவிப் போற்றுமினிராமன்
றன்பால்
இயமலியீமஞ்சேர்த்தி யென்றலு மவனுஞ்
சேர்த்தான்
மெயமலி யநுமன்றன்னைச் சீதைபாற் சேறி
யென்றான்.

(d) நல்லோர் சேர்க்கை ஒருபொழுது நன்மை வி
ளைவிக்காதிராது - பிரயாணிகள் செல்லும்
மார்க்கத்திலுள்ள செடி கொடி புஷ்பங்க
ளின் பரிமளம் அவர்கள் வஸ்திரத்தை
விட்டு நீங்காதல்லவா.

(e) அறிவே பலமென்பார் சிலர் - ஆசாரமே பல
மென்பார் சிலர்; இவ்விரண்டினுள்ளும்
இரண்டாவதிலேயே உண்மை அதிகமிருக்
கிறதென்னவேண்டும்.

IV. Translate into appropriate Tamil :—

1. He might have done me a service, but he would not, though I besought him earnestly.
2. No one endures, none can endure, none will endure his cruelty.
3. Look out! or the carriage will run over you, especially when you go hard by the bridge.
4. It is excellent to have a giant's strength; but it is tyrannous to use it like a giant.

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

TELUGU : TEXT-BOOKS AND GRAMMAR.

I. వదలక బుద్ధినాత్మరిపు వర్గముసోర్చి జితేంద్రియుండవై
మొదలను దేశకాలబలముల్ తమ దైవబలంబుఁగల్గి భూ
విదితబలుండవై యహిత వీరులనోర్వఁగనుత్సహింతెదు
ర్మదమలినాంధచిత్తులఁ బ్రమత్తులనింద్రియనిర్జితాత్ములన్.
యోధలసింహనాదము మదోత్కటవారణబృంహితంబువే
గాధికవాజిహేషిత మహారవముగ్రరథనేమిఘోషము
న్నాధితకర్ణరంధ్రమయి వర్షిదిగంతములందుమ్రోసెనం
ఘోధిరవంబువోలెఁ గురువుంగవునచ్చతురంగవాహినిన్.

(a) పై పద్యములకు దండాన్వయములు వ్రాయునది.

(b) ఆత్మరిపువర్గములెవ్వి?
వానికినామాంతరమేమి?

(c) భూవిదితబలుండు; ఇంద్రియనిర్జితాత్ములు; చతురంగ వాహిని. వీనికి విగ్రహములవ్రాసి సమాసములఁ దెల్పునది.

II. విమలమణిమయములగు దూలములంగంబముల గోడలనువేదు లఁగు
ట్టిమములఁజుట్టినప్రాకారములను గరమొప్పుచుండ రచియిం
చెనభన్.

పై పద్యమునందలి తత్సమ తద్భవదేశ్యపదముల స్వేర్వేర వ్రాయనగు..

III. 'నయవిక్రమ క్రమజ్ఞులయిన మంత్రులతో రాజు ప్రజలఁ బాలింపవలయును.' అను నాంగిలేయరాజ్య పద్ధతివాక్యమునకు

నిదర్శనముగ సభాపర్వమున నారదుఁడు ధర్మరాజుకు రాజనీతి విషయమై చెప్పినపద్యములుగాని వాని తాత్పర్యములుగాని వ్రాయఁదగు.

IV. (1) ఆధారాధేయ భావంబునంజేసి యాదర్శంబున ద్విరదంబన్నువయై కనుపట్టునట్టులలంతులఁజేరిన వలంతులును నలంతులయి కానఁబడుదురు.

(2) ఈ నికటంబునమే మజ్జనంబును స్నానపానంబులు సేయుతటిని యీ యేటివరపుచేనిదాఘంబగుడుఁ బ్రజలాతపతాపంబున జంబాలమాత్రంబయ్యె.

(3) ఆ పరమహంసావతంసుండాశలజయించి నిజాప్త ద్విజ నికరపరివేష్టితుండై రాజయోగంబు మెఱయఁబుండ రీతాసనంబుననుండె.

(4) ఎవ్వనిపేరువిన్న సహితచక్రంబులు తల్లడిల్లుచుండునాకువలయై కాధినాథుఁడగు రాజుదూతను.

పై వాక్యములలో మొదటి రెంటికి నెక్కొక్కయర్థమును గడపటి రెంటికి రెండేసియర్థములును వ్రాయవలయు.

V. (a) క్రూసేడ్లను మతయుద్ధములచే నైరోపాఖండమునకుఁ గల్గిన నాలుగైదు ముఖ్యప్రయోజనములఁ దెల్పునది.

(b) పార్లమెంటు మూడవయంగముగు సామాన్య జనసంఘముయొక్క యుత్పత్త్యభివృద్ధులనుగుఱించి సంగ్రహముగ వ్రాయవలయు.

(c) సంప్రయోగాధికారమననేమి?

అయ్యధికారముఁబట్టి రాజునకుఁగల స్వాతంత్ర్యము లెయ్యివి ?

VI. (a) 'ఆ ! ఇవి యేటిమాటలు'. 'ఆ' అనునది యే యర్థకము ?

(b) 'లోకమున సాధునిందకంటెఁ బాపంబెద్ది.' ఈ వాక్యము నర్థముమారకుండ 'సాధునింద కర్తృపదముగ వ్రాయునది.

(c) 'వారి యనుమతిలేక పన్నుల నేర్పఱపఁగూడదు' ఇందుఁ "గూడదు" అను దానిబదులు వలయును అని వ్రాసిన వాక్యమున నికనేమి మార్పుగల్గు ?

(d) నీయట్టిఁడె, లాగుండియ, ఇంద్రునందునికి, సలుపుదె, నడుపుదయ్య. ఈ రూపముల కాధారములగు వ్యాకరణ సూత్రములు వ్రాయునది.

(e) సావడె, సావడియె, వీనికి రూపాంతరములును ; కడు, చాకి, వీనికిఁదద్ధితములును ; రోయు, ఊదు, వీనికిఁ గృదంతములును వ్రాయునది.

(f) శుకసుమంత పైలను వ్రతాదులైన మునులు నేమునరిగి తిమెంతయు రమ్యమైన ధర్మరాజుసభకు. ఏము' అన నిటనెవరు ? ధర్మరాజుసభకు, ధర్మరాజుసభకు. భేదమేమి ? పై వాక్యమునఁ గర్తక్రియలకుఁ గల సంబంధమున విశేషమేమి ?

VII ఘోరరణంబులోననధికుఁ గృతబంధుజనాపకారునే

దారుణలీలఁగంసునతి దర్పితుఁజంపుటఁజేసియమ్మహా
క్రూరుఁడు కంసుభార్యతన కూఁతురుగావునదానిసంతత
ప్రేరణనాకువద్రవము పెక్కువిధంబులఁజేసెనీనునన్.

(a) ఈ పద్యమునే సందర్భమున నెవరు ఎవరితోఁ జె ప్పిరి?

(b) రణంబులోనన్, చంపుటఁజేసి, కావునన్, చేన్. వీని కతిదేశాన్వయములఁ దెల్పునది.

(c) 'కృతబంధు జనాపకారుఁడు.' ఎవఁడు? వానికి పే రెట్లు తగియున్నదియుఁ గారణ సహితముగఁ దెల్పు నది.

VIII. (a) దంభోద్భవ, కార్తవీర్య, భగీరథ, భరత, యవనా శ్వుల చరిత్రములలో ముఖ్యాంశముల నొక్కొక వాక్యమునఁ దెల్పునది.

(b) హంసడిభక వియోగుఁడగు జరాసంధుఁడు, మల్లయు ద్ధముచేయుచున్న భీమ జరాసంధులు ఎవరెవరికిఁ బోల్పఁబడిరి?

(c) 'పాస్తి మశకాంతరము.' 'వజ్రమునకు వజ్రంబు గొఱంతయగునే.' వీని సమయసందర్భములఁ దె ల్పునది.

IX జనుల నభిమతార్థ సంప్రదానంబులఁ దృప్తిఁజేసె వంశదీప కుండు.

దీనికి గణవిభజనమునేసి యతిస్థానములఁదెల్పి ఇది యే పద్యభాగమైనదియు నేతఱగతిపద్యములలోఁ జేరినది యుఁ దెల్పునది.

X. ఆంధ్రభారతమును దెనిఁగించిన కవులలో నెవరెవ రేయే గ్రంథాంతరములఁ జేసిరి?

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

TELUGU: TRANSLATION AND COMPOSITION.

I. Translate into Telugu—[See Urdu Translation paper, p. xxxi.]

II. Subject of a short essay in Telugu:

The force of example for good or evil. మంచికిఁగాని చెడుకుఁగాని నిదర్శనమువలనఁ గలుగుశక్తి.

III. Translate into English:—

(1) ఒక్క యేటిమడుఁవున దీర్ఘకాలమునుండి, దీర్ఘదర్శి, ప్రాప్తకాలజ్ఞుఁడు, దీర్ఘసూత్రుఁడు, నని మత్స్యంబులు మూఁడుకూడి వసియించుచుండును. అట్లుండఁ గొండొక కాలంబునకు వేసవి సమీపించుడు, దీర్ఘదర్శి తక్కటి మీనలెంటిని జేరంజేరి యిట్లనియె:—"మిత్రములారా! మీరునుం జూచుచున్నారుగదా! ఆ దినమున కాదినము వేసఁగి మిగుల నాసన్నమగుచున్నది. ముందు నిక్కముగా నీల్లి పురఁబాఱెదితటిని మనకొండొకచోటికిం బోవశక్యముకాదు. కాఁబట్టి యిప్పుడే యీ యేటం బడివెడలి యగాధజలంబును జలచర బహుళంబును నగు మఱియొక్కమడుఁవుం జేరుదుము."

(2) మఱియొక్కటివినుము. ఎట్టి విక్రమధురంధరులును నా కట్టె దురందలచూపనోడుదురు ఈతుచ్ఛంబగు డేగ యెంత. ఆ సాహసంబును నెక్కు ఖగంబుగాని దయ్యం బుగాదు. నీమది నాయధమశాసనంబున కింతభీతిల నేల. అదియు శకుంతంబనేనును శకుంతంబను. ఎక్క డనేనియు వజ్రంబునకు వజ్రంబుతక్కువగునె. ఏల యూఱక కొఱమాలిన పిఱికితనంబుగఱపెదవు. అక్క ఱటి పక్కినికంబ మనదిక్కునకు వచ్చెనేని యొక్కము క్కుపోటునం గీటడెంచదనుండె, కులిశ సఖంబులగు నిశాతనఖంబులఁజించి చెండాడెదనుండె. ఆర్యులు కా ర్యంబులఁదమ శౌర్యంబులఁ బ్రకటింతురుగాని మాటలం బ్రకటింపనెల్లరు. నాకిప్పుడూరక నీతోడి వాగ్వాద మేల. నీవుచూచి మెచ్చుతఱియనువచ్చును. నావ చనంబులు విశ్వసించి యావంతయు లేక నిశ్చితంబుగ నుండుము.

(3) నీరజమిత్రుఁడేల ధరణిగతుఁడయ్యెడు నెక్కొయంచువి ।
స్థిరమనస్కులైజనులు మెచ్చినిజద్యుతిఁజూచుచుండగా ।
నారదుఁడేగుదెంచె గగనంబుననుండి సురేంద్రమందిర ।
స్ఫారవిలాసవాసియగు పార్థుఁగృహంబునకుంబ్రియంబునన్.

(4) కులరూపగుణద్రవ్యం ।
బులువిక్రమవంతునందు భూవిదితములై ।
నిలుచునవిక్రమునకునవి ।
గలిగియులేనిక్రియన ప్రకాశంబులగున్.

(5) సంతతమైనసర్వసుఖ సంపదగల్గియు దానికిందగన్ ।
సంతతిలేమిఁజేసియది సర్వముహేయముగాఁదలంచిని ।
శ్చింతుడనైధృతిందవము నేయఁగవచ్చితిఁబుత్రజన్మహా ।
సంతతు నేనుమీదయఁ గృతార్థతఁబొందుదు సన్మనీశ్వరా.

(6) (a) నేనందని మ్రానిపండ్లు గోయందలపెట్టితిని.

(b) సముఖమున రాయబారమేటికి.

(c) తాఁజడ్డక్రోఁతి వనమెల్లఁజెఱిచినది.

(d) అతివినయము ధూర్తలక్షణము.

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

KANARESE: TEXT-BOOKS AND GRAMMAR.

I. (a) నీవు ఓదిన భాగవత దశమస్కంధద ఱాదియల్లి కవియు యావ యావ దేవతెగళన్ను స్తుతిసి ఒబ్బొబ్బనింద ఏనేనను వరగళన్ను బేడికొళ్ళుత్తానే? ఈస్తుతిగళింద కవియు యావ మతదవనెందు నిశ్చైసబహుదో?

(b) భాగవతపు ఎష్టుస్కంధగళాగి విభాగిసల్పట్టిదె? నవమస్కంధదల్లి ఏను హేళల్పట్టిదెంబదు నీవు ఓదిద దశమస్కంధదింద తిళియబరుత్తదో? అదేనను?

(c) ఈ కన్నడ భాగవతద కర్తు యారు? ఈతను ఎష్టువరుషగళ హింది జీవిసిద్దనెందు నిశ్చైసబహుదో?

(d) కృష్ణునిగూ కంసునిగూ ఇరువ సంబంధవన్ను తోరి సువదక్కె ఒందు వంశావళిపట్టియన్ను బరియిరి.

II. (a) 'పరమభక్తి అకౌవితానాథ్ శ్రీకజనాయాఖిష్ట ఫలపూరిత నిజాంఘ్రిత్థామి గౌరీపతి సురద్రుమ విగే నమగిష్టార్థ సిద్ధియను'—

ఇదన్ను ఉపమానోపమేయ సాధారణధర్మ వాచకగళెంబ అక్షణ సహిత వాద ఉపమియాగి బరియిరి.

(b) కెళగే లుప్తమాడిద శబ్దగళన్ను బరెదు అవుగళల్లిం దొందు లూయాస్థళదల్లి హ్యాగే యోగ్య వాద శబ్దవెందు తోరిసిరి.

(1) విఘ్నవారిధిగా ——

విఘ్నపన్నగకులకే ——

విఘ్నకాననకా విఘ్న తిమిర ——

విఘ్నమేఘావళిగే ——

విఘ్న వెంబనగక్కె ఘన ——

విఘ్నగజ—— నిష్టార్థవను నమగిగే ॥

(2) హరిశృంగారాయను బుద్ధియల్లి న్ను, కోపదల్లి న్ను, ధనదల్లి న్ను, గాంభీర్యదల్లి న్ను తోలుత్తిద్దను.

(3) నేదరదల్లిరువ అలంకార యావదు?

(c) తోరవను గ్రేయువరు సరిసుతరు బాంధవరు

జోకేకప్పిద బళికలథ విథ ।
తేరదొళు ఘళిసిరద పుణ్యపాపగళిరదు
సాకారవాగి సంగడ బపుదల్లది ।
అస్థిరద దేహవను నజ్జినంబిరబేడ.
ఈ కౌశ్వర్యవన్ను కొడువ ఒందు పద్యవన్ను
నీవు ఓదిదరింద బరియిరి.

III. (a) కేళగణ పద్యగళ అర్థవివరగళ హేళువదు.

(1) కొందవగగే కొలేకప్ప అరివుదే
తందే బరిదే బయలమాళిగే
కొందు నీనేకేళివే నరకకే సంబళవఘళిసి ।
కొందిదవరే మగుళే కొలువరు
కొందవర నంతవర కైయలి
కొందువరు కుగేకులవు జన్మాంతరకే బిడదేంద॥

(2) జలద రంపాదిగళు రవిమం
డలకే కోపదంతనల కాష్ఠా
వళిగళలి కోపదంతే కర్మగళ సంగియేందేనిసి ।
కొళదు కేడువీ కాయరరణా
వళియ విషయక్కాంతి తనగేం
దళలువను రాగానుగతియలి జీవ నివనేంద॥

(b) మేలిన పద్యగళల్లి కేళగే గీటు కొడిద శబ్దగళ అవయవ నిష్పత్తి హేళిరి.

IV. (a) కేళగిన వాక్యగళింద సచేసళ్ళట్టి పూవకరథియన్ను హేళిరి.

(1) లిబుధి మాగఁవనందు-ఘోపతిగిత్తవోల్.

(2) కపిల నేత్రాగ్నిల నిర్దగ్ధ సగర పుత్రరం
సగ్గిగరినిసి.

(3) దక్షాధ్వరవ భంగిసి।
శిక్షిసి దుష్టరను మరళి బిడుగంగారనిం।
రక్షిసి కిత్వవనెరుకు।
ల్దక్షిణా ముఖలీలేయాంతి యక్షయరూప॥

(4) నగేయోళ్ళు తగళనురుహిది।
మిగేపాదది యమున సదిదు సలహిది।
మునియం.

(5) హరివిధిగళకుంకారది।
పరమకౌఁవేసుతకాదుతిరలంతరదోళ్।
వరలింగార్పతియాగవ।
రురవగోయం హరిసిమిరది యరివిగ్నోరోళ్॥

(6) కృష్ణను తాను వసుదేవ దేవకియరిగే మూరు జన్మగళల్లి మగనాగి హుట్టిదినేందు హేళుత్తానే-లిపుగళల్లి ఒందనే మిరడనే జన్మగళ్ళావవు?
మత్తు లీా జన్మగళల్లి వసుదేవ దేవకియరుయారాగిద్దరు?

V. (a) పతివ్రతియాద హెంగసు తన్న గండను లిళిదల్లిమాడతక్క- ఉత్తమ మధ్యమ క్రియెగళ్ళావవు? ఇవల్లదే లివళు ఇరబహుదాద బేరే ఎరడు స్థితిగ

శ్యావవు ? ఒందొందక్కే హిసరేను ? ఇదర విషయ హరిశ్చంద్రాఖ్యానదల్లి హేళిద మాతు గళింద హిందు జనరల్లి విధవా వివాహ ఖాదియల్లి ఇత్తో ఇల్లవో ఎంబదన్ను నిశ్చైసబహుదో ?

(b) 'లినితరోహు సూర్యనను ప్రాచ్యాంగనావతోరగాసక్తియింద పశ్చాదద్రియంస్పృదిదం'—హీగే పశ్చాదద్రియ స్పృదిదరింద కమలగళు ముకుళితవాదవు, భృంగగళు దీనత్వవన్నైదిదవు, అంధకారవు తోరవన్ను పీడిసతొడగితు, రంగుగళు వ్యర్థవాదవు-ఇవేముంతాద వికారగళన్ను హరిశ్చంద్రాఖ్యానదల్లి సాధారణ తోరక వ్యాపారగళిగే హోలిసిరుత్తదే - ఖా తోరక వ్యాపారగళ్యావవు ?

(c) 'హుంచి నీను బ్రాహ్మణరం వంచిసిదవనేందు కేళిబల్లే'—ఎంబదాగి విశ్వామిత్రను హరిశ్చంద్రనిగే హేళుత్తానే. ఈప్రకార అవను వంచిసిద్దుంటో ?

(d) కృష్ణను భండియన్ను ఒద్దు బూరుబూరాగి మాడిద్దు యావకారణ ?

VI. (a) కేళగిన పద్యవన్ను వివరిసువదక్కే అవశ్యవాద టిప్పణి బరియిరి.

ఒందు చోదలేలేహుత్తకామిర

డందవడదనవాక్షరసనా
ల్కొందడింటా శాబిమొదలేశారరిందకుదు ।
సందకిరు బేర్చేదు బిబ్బే
రొందు ఘనతర పిరడుపక్షిగ
ళిందిసవుదొందాది వృక్షవదంతరిక్షదలి ॥

(b) నాల్కుపాయ, శూకపంజర, లివస్థాత్రితయ, త్రిసక్త, లిందరి యావవు ?

(c) కుస్త్రశ్వరథ పదాతి - ఇదక్కె ఒందేశబ్దబేళిరి.

(d) మనుగళు, ప్రజేశ్వరరు, మరుత్తుగళు, వసుగళు, రుద్రరు, లాదిత్యరు, లాశ్రమగళు, వర్ణగళు— ఇవు ఒందొందు ఎష్టేష్టాగి బేళుత్తారే ?

VII. (a) కెళగిన వాక్యగళ లిర్థవన్ను వివరిసువదు :—

(1) భవచ్ఛిద్రాన్వేషణనాగిరుత్తానె.

(2) సతిరుత్థిబే జీత్రకర్మవెంబంతే నసగే లి పాయ శంకెయుంటాగిరువల్లి నానితరగం కురితు చింతిసలేకే.

(b) కృశాను, సంకర్షణ, నీలలోహిత, సహజ సం విద్దళిత నిద్రాను, గంధవాహ, బిడుగణ్ణ, కృత్తి వాస, ఇవుగళు యార లిన్వర్థనామగళెందు బేళి లవు హ్యాగె లిన్వర్థవెంబదన్ను వివరిసి.

(c) సిద్ధాంత వస్తుచింతన, శివాపదాన, నిరగ్రలనిగళ త్రివాహ, స్వర్గాపవర్గ, వళక్షదక్ష,

స్తనంధయ, అన్యాయ, పరుతవిసు, క్షణభం
గుర—ఇవుగళ అర్థవేను ?

VIII. (a) సరిసమ మి, తజ్జాతిద్విర్వచన—అందరేను - ఉ
దాహరణేకొడిరి.

(b) అవ్యాతిద పరిహారగళిష్టువిధ ?
ఒందొందక్కే ఒందొందు ఉదాహరణే కొడిరి.

(c) అవ్యయగళిగే విభక్తి ప్రత్యయగళు బరువదుంటే ?
ఇద్దరే అంథ అవ్యయగళల్లి 6 బరెయిరి.

(d) 'ఏను' శబ్దద విభక్తిగళన్ను బరెయిరి.

(e) 'జ్ఞానవుళ్ళవస్తుగళల్లి పురుషర నామగళిగే పుల్లింగవూ
స్త్రీయర నామగళిగే స్త్రీలింగవూ బరువదు.'
ఈ సూత్రక్కే అపవాదగళన్ను బరెయిరి.

(f) కేళగిన వాక్యగళల్లిరువ తప్పుగళన్ను తిద్ది బరె
యిరి :—

(1) అదరన్ను నోడి హరిశంద్రరాయను బహువాగి
అవనిగే సమాధానంగళం హేళిదను.

(2) నిరుపమాప్సర నివహదింసటి ।
తరళమళిగర పుత్రవిబుధిరి ।
శ్వరరు నేరదుదసంఖ్యే ప్రేమానిరరు సం
దనిసి ॥

(3) ఎంతుధరిసిదే జతరదలినిరి ।
నేంతు జినిసిదే రేవనిన్ను దర ।
దంతరదలడగిరుదల్లే బ్రహ్మాండకోటిగళు॥

(4) ఒసగెవరెగళ తొప్పిరలుమొళ ।
గిసువకొంబు కొళల్లళనుబా ।
రిసువబిరుదిన రకుళిగళనోరంతె గజిరిసువ॥
హొసపరియ సంగీతదలిమో ।
హిసువనందన గుణవర్కైవా ।
రిసువరళరళ విసరుదందానందగోరుకులవ ॥

IX. నీవు ఒదిద తాగవలద కథియింద కలియబహుదాద నాల్కు— ముఖ్య వివేక నీతిగళన్ను నిదర్శన సహిత వాగి బరెయిరి.

TUESDAY, 16TH DECEMBER, 2 TO 5 P M.

KANARESE: TRANSLATION AND COMPOSITION.

I. Translate into Kanarese--[See Urdu Translation paper, p. xxxi].

II. Subject of a short Essay in Kanarese—

The force of example for good or evil. ఉదాహరణెగళు ఒళ్ళీ విషయదల్లాగలి కెట్ట విషయదల్లాగలి ఏను బళ (ప్రయోజన) వన్నుంటు మాడుత్తవె.

III. Translate into English:

(1) అరనకేళింతెారు మర్కటు ।
దురుళకంసవ కైయలంతర ।
పురకేసరియలు మేలె నప్తమగర్భవిళిగిళిమి ॥
సరసిజాననె దేవకియబను ।
రిరలుకంపను కొడువపొలవ ।
తరిసలేందనురారి బగెదనునిజకృపేక్షణవ ॥

(2) ఖళనికర శిఙ్జిదరిశౌరవ ।
కళియలేందిఁధరగేతంనయ ।
నిళయదలి మ్మిదోఁరిచ్చైతనగేందు శిశువాగి ॥
భాలరిశౌపుభక్తకరుణా ।
జలధియేఁ నిజభక్తజనవ ।
క్ష్మలనేభక్తాధీనవృత్తిమిజయనమోఁయేంద ।

(3) ఎన్నుదరదలిచేఁవనీఁను ।
క్ష్పన్న వఱుదనుకేఁళిశొందను ।
మున్నవేఁనిన్నగ్రిజరనీఁకంసరడుపాపి ॥
ఇన్ని దనుకేఁళిదరిబారనే ।
కున్ని శొలలీక్షణావియనుకర్ష ।
పాణ-వనపదకేరగి బిన్న కుమాడిదనునదుగి ॥

(4) లిత్తలన్నే గధరియ శిశుగళ ।
నోత్తరిసినోఁడుత్తబందళు ।
మృత్యువనుకరవంకే పూరనినందగోఁకులకే ॥
శిత్త తాయందదలివేఁషవ ।
శొత్తుమూరాకారవనుమర ।
నుత్తమాయావిమునిప్రియమాళి-యిద్దిడిగే ॥

(5) పురదుగ-ంగళబల్లేమాడది, ప్రిజాక్షోభంగళం నోఁడదెల్లరు విశ్వాసిగళేందు నంబి బళుదుంటాదప్పు దంకాణ దాళురదిందుండకి నిద్రగ్నేదు మదనం గాళాగిరుంతోఁర దోఁళ్ధిరియేఁ? నోక్కద కోఁణస్వే! కురకురా! శ్రీఁజన్న సోఁమీశ్వరా!

(6) ఇక్ష్వాకు హరిశ్చంద్రుని, రాజబీదియోళ్ళరుక పురజనరం కురితు పీఠుక్షిప్తను, ఎల్లైమహార్మరుగళిరా, నానాదిక్ష్వ వంశదోళుట్టి, త్రిశంకు మహరాయంగె కువరనాగి, పొడవియం పొరెయుక్తిదు విశ్వామిత్రంగె సర్వస్వమన్నిత్తు, లూరంగె కొడతక్క ధనక్కాగి ఇల్లిగాంబందిపెను; ఈగలాదరో, ఈ మనదెరియళోర్వ ళల్లది బేరొందిల్లవు. అదరిం నిమ్మొళారాదరుం ధనకరిదొడె లూ ద్రవ్యమన్నె సగి ఈ నారీమణియం కైకొండు నన్నం సలహుబేకెందు బేడుత్తిదనె. ఇదంకేళి అల్లిదవరెల్లరుం వ్యసనాతిశయదింద వ్యవహారమంతొరదు, మున్న కశ్యప పుత్రనాద బాలవటుపోర్వంబందు మూరడిగళంబయసి బలిచక్రవర్తియ సౌభాగ్య సర్వస్వమంకసగొండను; అంతీదుష్టనాద కౌశికమునియు ఈరాయనిం బంద సర్వస్వదిం దణియదిదురాశాపాత్రనాగి పీడిసుక్షిప్తనల్లా; అరటరట? ఈ పూర్వర సాంగత్య మెందిగూ ఇంతే సరి ఎందోర్వరొళోర్వరాడికొళుత్తిదరు. తదనంతరదొళురలివురుషం ద్విజరూపమంతాళ్దు, కాలు కౌశికనెంబ పిసరనాంతు, కైయోళ్పంచాంగమంపిడిదు, మనెమనెగళం పొక్కుయాచిసి శాకరకండులాదిగళం గ్రహిసి, లూ

ಪೊಟ್ಟಯಂಪೊಕ್ತು ಮಾರ್ಗದೊಳು ಪಿಲ್ಲಮಿಲ್ಲನೆ ಬರುತ ಲಾ ರಾಜ ರಾಜ್ಞಿಯರಂ ಕಂಡು ಅವರ ವೃತ್ತಾಂತಮಂ ತಿಳಿದು ಹರಿಶ್ಚಂದ್ರಂಗೆ ಶೀಘ್ರಕ್ಕೆಯನು, ಎಲೈ, ಸತ್ಯ ಸಂಧನಾದ ಪೊಡವಿಪನೇ, ನಾಂನಿನಗೆ ಬಯಸಿದಂತೆ ದ್ರವ್ಯಮಂಕೊಡಲು ಸಿದ್ಧನಾಗಿಹೆನು, ನಿನ್ನ ಸತಿಯಂ ದಾಸ್ಯಕ್ಕೆ ತಾರೆಂದುಸುರಿದನು. ಅದಕೆ ರಾಯಂ ಸಮ್ಮತಿಸಿ ಸತಿಯಂಮಾರಿ ಕಾಲ ಕೌಶಿಕನಿಂದ ಪುರುಳಂ ಕೈಕೊಂಡು ನಕ್ಷತ್ರರಂಗೊಪ್ಪಿಸಿದನು.

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

MALAYALAM: TEXT-BOOKS AND GRAMMAR.

I (a) വായിച്ച പതിന്നാലുവൃത്തം ആരുടെ കൃതിയാണ? അദ്ദേഹത്തെക്കുറിച്ചറിയുന്നത സംക്ഷേപിച്ചെഴുതുക. ൦൪ നീതിയിലുള്ള വേറൊരു കൃതിയുടെ പേർ പറക.

(b) പതിന്നാലുവൃത്തത്തിൽ വിവരിച്ച കഥ ഏതഗ്രന്ഥത്തിൽനിന്നെടുത്തതാണ?

II. (1) അസ്ത്രനമുക്കുപടജ്ജനമതിനാൽ ദുസ്മരമല്ലി ഹസമരസമുദ്രം.

(2) ദ്വേഷപരപോഷഗുരുദൂഷണപരാണാം ഭിഷണികൾകൊണ്ടു ഫലമില്ലറികസ്മൃത.

(3) പാവകൻ പിടിപെട്ട കോട്ടയിലായി നിങ്ങളുശേഷവും.

(4) മൃത്യുവന്നു ലലാടസീമനി നിൎത്തകൈളി തുടൎന്നു.

(5) ഗ്രീഷ്മകാലബലേനസവ്വൃണങ്ങളെന്ന കണക്കിനെ ശുഷ്കമാമിതു കൌരവബല

ഇവയുടെ അൎത്ഥം വ്യക്തമായെഴുതുക.

III. (a) "ദുഷ്ടനായതവാത്മജൻദ്രുപദാത്മജാക ബരീഭരംകഷ്ടമാശുപിടിച്ചിഴച്ചു." ൦രം കഥ സംക്ഷേപമായെഴുതുക. ൦രം ദുഷ്കൎമ്മത്തെക്കുറിച്ചു കിരാതത്തിൽവരുന്നവിവരത്തെ എഴുതുക.

(b) അണിമതികലയും തുമ്പയുമേല്ലും ഫണപതിഫണഗണ മണികളുമണിയും മുരരിപുതൻപദകമലെപരിചൊടു പണിയുന്നവരുടെ പാലനശീലൻ പ്രണയിനിയാകിയമലർമകൾതാനും പ്രണയസുഖേനരമിപ്പാനായി. &c.

ഇതിൽ വല്ല അബദ്ധമുണ്ടെങ്കിൽ കാണിക്ക. വൃത്തത്തിന്നു ദോഷം വരാത വിധം തിരുത്തുകയും ചെയ്ക.

IV (a) വിദുരരെക്കുറിച്ചറിയുന്നതചുരുക്കമായെഴുതുക.

(b) ചതുൎവ്വുപായങ്ങൾ ഏവ? ഇവയിൽ ഓരൊന്ന ഏതേതവസ്ഥയിൽ യുക്തമെന്നാണ വിദുരരുടെ അഭിപ്രായം

(c) കുടിലതആൎക്കാവാമെന്നാണ വിദുരവാക്യത്തിൽ പറഞ്ഞിട്ടുള്ളത ?

(d) രാജാക്കന്മാരുടെ ലക്ഷണങ്ങളെ വിദുരരെങ്ങിനെ വൎണ്ണിക്കുന്നു ?

(e) "ജനകനൊടുതുല്യം തനയനിതിചൊല്ലുണ്ടതുപുനരസത്യം".—ഇതിനെസ്ഥിരപ്പെടുത്തുവാൻ പറഞ്ഞ ദൃഷ്ടന്താമെന്താണ ?

(f) കണ്ണൻ, ശകുനി, ദുശ്ശാസനൻ, എന്നിവരുടെ സ്വാഭാവിക ഗുണങ്ങളെ വിദുരർ എങ്ങിനെയാണ സംക്ഷേപിച്ചു വൎണ്ണിക്കുന്നത ?

V. (a) നൈവവിചാരം, ശാന്തിമനുചിന്തയ, മുകതസംഭ്രമം, വചാംസി, കൎമ്മകരഭാവം, പൂജകഴിച്ചു, വാൎംകൊടുക്ക, വിത്തം, നിന്ദാസ്തുതി, ഗൂഢം, കഥകൂടാതെ, ഇയലുക—ഇവയുടെ അൎത്ഥം എഴുതുക.

(b) കതിരവൻ, ശരധി, ശിരൊഭ്രഷ്ടം, പുഷ്ടമോദം, നിമ്നഗാ, പക്ഷപാതം,—ഇവയെ പദാംഗങ്ങളായി വിഭാഗിച്ചു ഓരൊ അംഗത്തിന്റെ അൎത്ഥമെഴുതുക.

(c) മനസി - ശത്രുൻ - നരാണാം - ത്വയാ-
മുനെ - ഇവയുടെ വചനവിഭക്തികളെ
ഴുതുക.

(d) "ഭീമ സഹോദരനാകിയ നിന്നുടെ ഭീ
മപരാക്രമമറിവാനായി ഭീമകിരാതശരീ
രംപൂണ്ടു" ഇതിന്നുവിപരീതമായി വ
ല്ലതും ശിവൻ പ്രസ്താവിച്ച പ്രകാരം
വായിച്ച പുസ്തകത്തിൽ മററു വല്ലെട
ത്തും പറഞ്ഞിട്ടുണ്ടൊ ?

VI 1. (a) ലാക്ഷകൊണ്ടു ചമച്ച കോട്ടയിലിട്ടു ചുട്ടു
പൊടിച്ചതും.

(b) ഖാണ്ഡവം വിപിനം മുടിച്ചമിടുക്കനെ
ന്തിതു ദുഷ്കടം.

(c) പുരവര ഭവനം മൂന്നും ഭസ്മമതാക്കി.

(d) ബാണൻെറ വാതിൽ കാത്തവൻ.

ഇവയിൽ സൂചിപ്പിച്ച സംഗതികളെ ചുരുക്ക
മായി പറക.

2. ഇന്ദുശേഖരൻ - ഉരഗധ്വജൻ - കാലാന്ത
കൻ - മുരഹരി - നരകാന്തകൻ - രാമ
സോദരൻ-പഞ്ചായുധരിപു—ഈ പേ
രുകൾ ഓരൊന്ന എടുത്ത അത ആരു
ടെ പേരെന്നും ആപേരിന്നു കാരണ
മെന്തെന്നും എഴുതുക.

VII. 1. (a) ബാണം തല്ലിയൊടിച്ചു പൊഴിക്കണ
കണ്ടു.

(b) അച്ഛനടങ്ങിയിരിക്കേവെണ്ടു.

(c) കാര്യംപറയാമറിയെണമെങ്കിൽ.

(d) വരളാൻള്ള കുഴമ്പുമതിന്മേൽ
പിരളുന്നേരം താനെ വരളും

ഇതിൽ കീഴ്പ്പുരയിട്ടപദങ്ങളെ വ്യാകരിക്ക

2. മേൽ "കാര്യം പറയാമറിയെണമെങ്കിൽ" എന്നതിനെ വാക്യപരിച്ഛേദന സമ്പ്രദായത്തിൽ പരിച്ഛേദിക്ക.

VIII. (a) ഹരിശ്ചന്ദ്രനുണ്ടായ കഷ്ടങ്ങൾ ഭവിപ്പാൻ ഇടവന്ന തെങ്ങിനെയെന്ന ചുരുക്കമായി പറക.

(b) ഹരിശ്ചന്ദ്രപുരാണത്തിൽനിന്നുനാംമുഖ്യമായി അറിയേണ്ടത എന്ത?

(c) കോസലം, ഗോമതി, ഇവക്ക ഇപ്പോൾ നടപ്പായ പേരുകൾ എന്ത?

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

MALAYALAM TRANSLATION AND COMPOSITION.

I. Translate into Malayalam—[See Urdu Translation paper, p xxxi]

II. Subject of a short Essay in Malayalam—

The force of example for good or evil. ഗുണത്തിനാകട്ടെ ദോഷത്തിനാകട്ടെ അന്യന്മാരുടെ പ്രവൃത്തികൊണ്ടുണ്ടാകുന്ന ഫലം.

III. Translate into English—

രാജാവ ആലോചിച്ചു. വധം ചെയ്യുന്നവർ ആരോ അവരെ ചിവനങ്ങൾകൊണ്ടറിയാം. ഇവളുടെ മുഖത്തിന്നാകട്ടെ സ്വരത്തിന്നാകട്ടെ സ്ഥിതിക്കാകട്ടെ ഒരു വികാരവും കാണുന്നില്ലാ അത്രമാത്രമല്ല ഒരു ആകൃതിയും പ്രാണഹിംസാ സ്വഭാവത്തിന്നൊത്തതല്ല. ഒരുവിവരം മന്ത്രികളെനോക്കി രാജാവ അരുളിചെയ്തു. അപ്പോൾ പ്രധാനകിങ്കരന്മാർ സ്വാമിൻ! ബാലനെ എടുത്തുകൊണ്ടുപോയ മാർഗ്ഗത്തിൽ കാൽചുവടു സൂക്ഷിച്ചു അറിഞ്ഞു. ആ മാർഗ്ഗേണ ഏകാന്തവിധം തിരിഞ്ഞു. ഇവളെ ബന്ധിച്ചുകൊണ്ടുവന്നു ഞങ്ങൾ ഇത സത്യം.

1. (a) നല്ലജനങ്ങടെസഭയിൽചെന്നാൽ
വല്ലതുമവിടെശോഭിതമാകും
മുല്ലപ്പൂപൊടിയെറുകിടക്കും
കല്ലിനുമുണ്ടാമൊരുസൌരഭ്യം
സ്ഥാനഗുണംകൊണ്ടുള്ളവാകും
ബഹുമാനവിശേഷംവരുമെന്നുള്ളതു
ഞാനൊരുപദ്യംചൊല്ലാമായതു
മാനുഷരെല്ലാംകേട്ടറിയെണം.

(b) കണ്ണങ്ങൾക്കിത്തുകൊൾക്കുന്നെരം
പുണ്ണിലൊരമൃതറച്ചതുപൊലെ.

(c) അറുതികെടുപ്പാൻകൂടില്ലെങ്കിൽ
പൊറുതികെടുപ്പാൻഞാൻമതിയാകും.

2. (a) നൃപതികുലമൌലെനിശമയഗിരംമെ
കൃപണജനഭാവംകളുകഗ്ഗണസിസ്ഥെ:
കപടകുടിലന്മാരോടുപരിയിച്ചാൽ
ചപലതകളുണ്ടാം.....

(b) പരധനമടക്കാനതികുതുകികൾക്കം
പരനൃപതിമാരിൽഭയമിയലുവോക്കും
പരതരുണിമാരിൽപ്രണയമുള്ളവോക്കും
കുറയുമിഹനിദ്രാ.....

3. (a) വലിയൊരഭിമാനക്ഷയമുടയവക്കും
വലിയവനൊടുള്ളിൽകലഹമുള്ളവോക്കും
പലപലവിമോഹംഹൃദികരുതുവോക്കും
കുറയുമിഹനിദ്രാ.....

(b) സതതഹിതവാദികുറയുമിഹലോകേ
സുതരിലനുരാഗംപെരുതിഹനരാണാം
പിതരിബഹുമാനംസുതനുമതിതുച്ഛം
ഇതികലയരാജൻ.....

IV. സ്ത്രീകൾ പഠിക്കാത്തവരായിരുന്നാൽ ആനയെകണ്ട കുരുടന്മാരെപോലെ ആയിതീരും. അതെങ്ങിനെ എന്നാൽ ചില കുരുടന്മാർ ആനയെകാണ്മാനാഗ്രഹിച്ച ഒരുമിച്ചപുറപ്പെട്ട ഒരു ആനക്കാരന്റെ അടുക്കൽ ചെന്ന തങ്ങടെ ആഗ്രഹം അറിവിച്ച ആനയെ തപ്പിനോക്കുന്നതിന്ന സമ്മതം വാങ്ങി. ഒരുവൻ ആനയുടെവാലുമ്മലും ഒരുവൻ കാലുമ്മലും ഒരുവൻ ചെവിയിലും മറെറാരുവൻ തുമ്പികയ്യിലും പിടിച്ചത

പ്പി സന്തോഷിച്ച മടങ്ങിവന്നു ആനയുടെ ആകൃതി വിവരിച്ചതിൽ വാലുപിടിച്ചവൻ ആന ചൂലുപോലേ എന്നും കാലുപിടിച്ചവൻ ഉരലുപോലെ എന്നും ചെവി പിടിച്ചവൻ മുറംപോലെ എന്നും തുമ്പിക്കൈപിടിച്ചവൻ ആന ഉലക്കപോലെ എന്നും തക്കിച്ചതുപോലെ പറിക്കാസ്ത്രികൾക്കംരംശ്വരനിഷ്ടയും അറിവും ഉണ്ടാകുന്നതഅസാദ്ധ്യമല്ലയൊ.

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

ARITHMETIC.

I. Simplify $\dfrac{5\frac{8}{11} + 4\frac{3}{5}}{8\frac{3}{5} - 5\frac{3}{4}} \div \left\{ \dfrac{\frac{7}{8} - \frac{6}{7} + \frac{5}{8}}{\frac{6}{7} - \frac{7}{8} + \frac{6}{8}} \text{ of } (1\frac{8}{11} \times 3\frac{4}{5}) \right\}$.

II. Find by practice the cost of 15 tons 11 cwts. 3 qrs. 10 lbs. 8 ozs. at Rs. 93 5 4 per ton.

III. Extract the square root of $1\frac{1}{25}$ to five places of decimals; and divide $1{\cdot}43\dot{8}$ by $\cdot 01\dot{3}$, giving the result in decimals.

IV. When the rupee is worth 1*s.* $7\frac{3}{4}$*d.*, what is the nearest sum of Indian money equivalent to £79-3-$7\frac{3}{4}$?

V. A tea-merchant has a rectangular space for storing tea. It is $15\frac{3}{4}$ ft. long, $10\frac{1}{2}$ ft. broad and $9\frac{1}{2}$ ft. high. He wishes to fill this space with packets of a cubical shape all of the same size. What is the largest size of such cubical packets that can be made to fill it exactly, and what would be the number of such packets?

VI. A starts in business at the beginning of the year with Rs. 3,000. On March 1st, he takes a partner B with Rs. 4,000. And on June 1st, he receives another partner C with Rs. 5,000. The profits at the end of the year amount to Rs. 1,480. What share of the profits should each partner receive? And what is the rate per cent. per month of the profits on the capital invested?

VII. What sum of money must I invest at 4 per cent. compound Interest, so that I may gain Rs. 390-3-$2\frac{3}{5}$ in 3 years?

VIII. A tradesman has been accustomed to give his customers three months' credit, but wishes to introduce the ready-money

system into his business. For how much ready cash should he sell an article that he has hitherto sold for £8 2-0, the rate of interest charged being 5 per cent. per annum?

IX. What rate per cent. will be received for money invested in $3\frac{1}{2}$ per cent. stock at 84?

X. Find the cost of building the walls of a rectangular room, 20 ft. long, 16 ft. broad, and 10 ft. high, with a door 7 ft by 4 ft and a window 5 ft. by 3 ft., at $2\frac{1}{2}$ annas per cubic foot. The walls being 2 ft. thick.

WEDNESDAY, 18TH DECEMBER, 2 TO 3-30 P.M.

ALGEBRA.

I. Find the value of $(ma - nb)(mb - nc)(mc - na) + (na - mb)(nb - mc)(nc - ma)$, when $a - b = 0$.

II. Reduce to its simplest form

$$\frac{a^5 + 11a + 12}{a^5 + 11a^3 - 54}.$$

III. Shew that $\dfrac{a-b}{m+ab} + \dfrac{b-c}{m+bc} + \dfrac{c-a}{m+ca}$

$$= m\,\frac{(a-b)(b-c)(c-a)}{(m+ab)(m+bc)(m+ca)}.$$

IV. Find the square root of $(a+4)^4 + 8a^2(a-4)^2 - 256a$

V. Solve the equations

(i) $\dfrac{3}{10x+9} + \dfrac{4}{45x+2} = \dfrac{7}{18x+5}$.

(ii) $\dfrac{x}{a} + \dfrac{y}{b} = 2,\ ax - by = a^2 - b^2$.

VI. A letter-carrier has to go daily from P to Q in a prescribed time. If he goes a mile an hour faster than his ordinary rate, he arrives at Q half an hour before the time. But if he goes a mile an hour slower, he arrives three-quarters of an hour too late. Find his ordinary rate, and the distance from P to Q.

THURSDAY, 18TH DECEMBER, 10 A.M. TO 12 NOON.

GEOMETRY.

I. If a triangle and a parallelogram stand on the same base and have a common altitude, the parallelogram shall be double of the triangle.

The diagonals AC, BD of a quadrilateral intersect at E. If the triangle ABC be equal to the triangle ADC, then will BE be equal to DE.

II. If the square described on one of the sides of a triangle be equal to the squares described on the other two sides of it, the angle contained by these two sides is a right angle.

III. If a straight line be divided into any two parts, the squares on the whole line and one of the parts are together equal to twice the rectangle contained by the whole and that part together with the square on the other part.

IV. The angle at the centre of a circle is double of the angle at the circumference, standing on the same arc.

Chords PQ, RS of a circle intersect at O within the circle. Shew that the angles subtended at the centre of the circle by the arcs PS, QR are together double of the angle POS.

V. The angle in a semi-circle is a right angle, and the angle in a segment of a circle greater than a semi-circle is less than a right angle.

VI. The angle BAC of a triangle ABC is acute-angled. Upon BC as diameter a circle BPC is described. If AP be the tangent from A to this circle, shew that $AC^2 + AB^2$ is equal to $BC^2 + 2AP^2$.

THURSDAY, 18TH DECEMBER, 2 TO 3.30 P.M.

PHYSICS.

I. A vessel quite full of water, and suspended from one arm of a balance, is counterpoised by weights placed in the scale pan of the other arm. If a stone, three cubic inches in bulk, be now hung in the water by a string, but so as not to touch the vessel, how will the balance be affected?

II. Sketch, and describe briefly the action of the common water-pump; and explain how the altitude of the place affects the height to which it will raise water.

III. A piece of cork 10 lbs. in weight is floating in a vessel of water: if the cork, bulk for bulk, is a quarter as heavy as water, what weight laid on it will make it just begin to sink? State clearly the physical principles involved.

IV. What is meant by the pitch of a musical note? Is a *loud* note the same as a *high* note? Give reasons for your answer

V. (*a*) In what three ways may a cold body receive heat from a hot body?

(*b*) A piece of red-hot iron is placed under the receiver of an air-pump, and the air is then exhausted. Will a thermometer at a small distance from the receiver be affected? Give reasons for your answer.

VI. (*a*) If at the top of Mount Blanc, where the cold is 5° below the freezing-point, we were to pour one pound of boiling water on one pound of ice, what would be the resulting temperature of the water after the melting of the ice?

(*b*) If one pound of iron and one pound of mercury be heated to the same temperature, and then put into separate pans, A and B, each containing one pound of ice cold water, which pan will now contain the hotter water? Give clearly the reason for your answer.

VII. (*a*) Shew by two diagrams, how a beam of sunlight is bent in passing (1) through a thick flat plate of glass, (2) through a glass prism.

(*b*) Why is the beam not only bent, but broken up into a coloured band by the prism? Name the colours in the order in which they will be seen on a screen.

VIII. What are the two laws of reflection of light? Give a sketch to shew why the image of a candle flame appears as far behind the mirror, as it really is in front of it.

IX. Describe the gold-leaf electroscope. How would you charge it with positive electricity, and then use it to find whether an electrified body is charged positively or negatively?

X. (*a*) Describe briefly the Leyden jar. How is it charged? How may it be used to give several persons a shock at the same moment?

(*b*) Why is Grove's battery superior to the original Voltaic battery?

THURSDAY, 18TH DECEMBER 3-35 TO 5-5 P.M.

CHEMISTRY.

I. Distinguish between a mechanical mixture, and a chemical combination.

II. Give the distinctive properties of Hydrogen, Chlorine, and Carbonic Acid gas. State how you would collect each of these gases.

III. What is meant by Oxidation? Give some familiar examples.

IV. Give the composition of the following substances: Saltpetre, Lime, Common salt, Diamond, Bone ash, Glass.

V. Give the different zones in the flame of an ordinary candle; and explain what happens in each.

VI. State the chemical changes which occur when (1) zinc filings are strongly heated in air, (2) a bright piece of metallic iron is placed in a solution of Sulphate of Copper, (3) Nitre and Sulphuric Acid are mixed together and heated.

FRIDAY, 19TH DECEMBER, 10 A.M. TO 12 NOON.

HISTORY OF INDIA.

I. Give a short account of the invasion of India by Alexander the Great. When did he come to India, and when and why did he turn back?

II. State what you know about the history of the ancient kingdom of Kanouj. When and by whom was it subjugated?

III. When did Aurungzib ascend the throne? What influence did his policy probably have upon the future history of the Empire? Contrast Aurungzib's character and policy with that of Akbar's.

IV. Mention the chief circumstances that led to the third Mahratta war and the results that followed from it.

V. When and how did the English acquire (1) the Northern Circars, (2) Sindh, (3) Nagpur, (4) Assam, (5) British Burmah, (6) Tanjore?

VI. (*a*) What were the chief causes of the first Afghan war? (*b*) Give the terms of the treaty of peace dictated by the Governor-General at the end of the first Sikh war. (*c*) Mention three battles fought during the second Sikh war.

VII. Give the names of the Governors-General, with the dates of their accession to power, from Warren Hastings to Lord William Bentinck. What reforms characterized the Government of the latter?

VIII. Write short historical notes on the following:—(1) Abul Fazl, (2) Guru Govind, (3) Tantia Topi, (4) Purnia, (5) Diu, (6) Segowli, (7) Wargam, (8) Bassein.

FRIDAY, 19TH DECEMBER, 12-5 TO 2 5 P.M.

HISTORY OF ENGLAND.

I. Give an account of the operations of Julius Agricola in Britain.

II. What were the social effects of the Crusades on the English people?

III. On what grounds did Edward I. base his claim to interfere in the affairs of Scotland?

IV. What led to the Wars of the Roses? What effect had they on the power of the Sovereign?

V. Give as briefly as you can, the chief causes that led to the Civil War which began in the reign of Charles I.

VI. Shew, in a tabular form, the descent of George I. and James the Pretender from the Stuarts.

VII. What were the chief causes of the War of American Independence? Give the date of the Declaration of Independence. When was it acknowledged by the English Government?

VIII. Give in a tabular form (*a*) the date, the name of the English Commander, and the result of each of the following battles:—Camperdown, Toulouse, Dunbar, Culloden, Aboukir; (*b*) the date, names of parties and terms of the following treaties:—Amiens, Utrecht, Pecquigny; (*c*) the reign when passed and the object of the following Acts:—The Habeas Corpus Act, The Septennial Act, The Catholic Emancipation Bill.

FRIDAY, 19TH DECEMBER, 3 TO 5 P.M.

GEOGRAPHY.

☞ *Candidates are required to give their answers in tabular form wherever practicable.*

I. (*a*) State the historical, geographical, or other interesting fact conveyed in each of the following names :—

(1) The Naze, (2) Behring's Straits, (3) Australia (4) the Lena, (5) the Himalayas, (6) Cumberland, (7) the Ran, (8) Lancaster, (9) Virginia, (10) Ecuador, (11) the Cyclades, (12) Aurungabad.

(*b*) In what country or countries do the following components of geographical names occur? State what each term stands for, and give one instance of a name in which each occurs :—

(1) Stadt, (2) tal, (3) spitz, (4) sk, (5) loch, (6) ras, (7) fiord, (8) kot.

(*c*) State the present names or localities of which the ancient names were :—

(1) Vidarbha, (2) Dandaka, (3) Pinákini, (4) Gaur, (5) Nishada, (6) Mithila, (7) Panchávati, (8) Páṭaliputra.

II A is an inhabited place in the Arctic Regions, and B another in a well-watered tropical region; what will be the dress, the chief occupation, and the food of the inhabitants of A and B respectively?

III.

Name of country.	Chief town.	Chief commercial product or products.	Name of inhabitants.	Language of the dominant race.	Title of the chief ruler
Brazil.	.....	.....	.....	.....	.....
.....	Ottawa.	.....	.....	.....	.....
.....	.....	.....	.....	Pushtu.	.....
.....	.....	.....	Magyars.	.....	.....

Construct the above table and fill in the particulars required under each head.

IV Draw a map of the Madras Presidency showing the lines of Railway open, and the principal towns through or near which each Railway passes

V (*a*) Name the country in which each of the following people live —

(1) The Boers, (2) the Hovas, (3) the Bhils, (4) the Ilyáts, (5) the Dyaks, (6) the Flemings, (7) the Lazzaroni, (8) the Veddas.

(*b*) Write a brief explanatory note on each of the following —

(1) The Tundra, (2) the Storthing, (3) the Mikado, (4) the Grand Lama, (5) the Marquesas, (6) the Aurora Borealis, (7) the Llanos, (8) the Lammergeyer

VI Each of the considerable rivers on the east coast of India has a delta, that is, each river falls into the sea by several comparatively narrow mouths, but each of the considerable rivers on the east coast of Britain falls into the sea by one mouth only and that a comparatively wide one. Account for these different phenomena.

MATRICULATION EXAMINATION, 1884.

TUESDAY, DECEMBER 16TH, 10 A.M. TO 1 P.M.

URIYA—TEXT-BOOKS AND GRAMMAR.

N.B.—Marks will be deducted for bad spelling.

I. (କ) ନିମ୍ନଲିଖିତ ପଦ୍ୟମାନଙ୍କ ଅର୍ଥ ଲେଖ ।

(1) କାହୁଁ ବନ୍ଧୁତା, କାହୁଁ ପ୍ରେମ ସୁନ୍ଦର,
ଯାର ପ୍ରାପତି ଯୋଗୁଁ ଦେବତା ନର ।
ବସ୍ତ୍ର ପ୍ରାୟେ ମିଳ ମୀରଦବର,
ବନମାଳା ପ୍ରାୟେ ଚାପ ଇନ୍ଦ୍ର,
ଯାହେହେ ଶୋଭଇ, ଯାକୋଳେ ଥରଇ
ଚପଳା ଅବଳା ବୀପି ଅମ୍ବର,
ଶ୍ୟାମ ସୀମନ୍ତିନୀ ସମ ସୁନ୍ଦର ।

(2) ଭବସିନ୍ଧୁ ମାୟାଶୈଳମୟ
ସମସ୍ତ ଛଳନା ପୂର୍ଣ୍ଣ, ସେଶୈଳେ ସବୁବାରୁ ପୂର୍ଣ୍ଣ
ହୁଅଇ ଆଶାର ଗତି ; କାମନାନିଚୟ
ବିଫଳ ସତତ ; ଚିତ୍ତ ଦୌର୍ବଲ୍ୟ-ଆଳୟ ।

(3) ଶକୁନ୍ତଳେ ! ବହୁଳ କଳିମାବଳବାୟୁ ତୁମ୍ଭଙ୍କୁ ସୁଖଜନକ
ବୋଧ ହେଉ ଅଛି !

(ଖ) ରେଖାଙ୍କିତ ପଦମାନଙ୍କରେ ଯେଉଁ ୨ ସମାସ ଅଛି, ତାହା
ବୁଝାଇ ଦିଅ ।

II. "ଶୁଣିଅଛି ଯୋଧେ ଦୁର୍ଗାବତ୍ତ କଥା ।"
"ପଞ୍ଚାପ୍ସରସରେ ଶ୍ରମ-ରମଣୀ
ବୀଣାଧ୍ୱନି ଶୁଣି ଏଣୀ-ନୟନୀ" ଇତ୍ୟାଦି ।
"କୈକେୟି, ଫଳିଲା ଏବେ ତୁମ୍ଭ ମନୋରଥ ।"
ଉଦ୍ଧୃତିତ ବାକ୍ୟମାନଙ୍କରେ ଯେଉଁ ପୌରାଣିକ ବ ଐତିହାସିକ କଥାର ଉଲ୍ଲେଖ ଅଛି, ତାହା ବୁଝାଇ ଲେଖ ।

III (କ) ସ୍ୱନ, ପୀନ, କୃଷି, ରମଣୀୟ, ଜୀବିତ ଓ ସାଧନ—ଏମାନଙ୍କର ବ୍ୟୁତ୍ପତ୍ତି ଲେଖ ।

(ଖ) ଦ୍ରକ୍ଷ୍ୟା, ସାକ୍ଷୀ ଉପଜ୍ୟକା, ସଙ୍କଟ ଓ ପୁଷ୍ଟିତ--ଏମାନଙ୍କର ବ୍ୟୁତ୍ପତ୍ତି ଲେଖ ।

(ଗ) ଗୋଟିକାରେ ଉପସର୍ଗର ନାମୋଲ୍ଲେଖ କର ଏବଂ ଉପସର୍ଗଦ୍ୱାରା ଯେ ଧାତ୍ୱର୍ଥ ମାନଙ୍କର ବ୍ୟତିରିକ୍ତ ହୁଏ, ତାହା ଦୃଷ୍ଟାନ୍ତ ଦ୍ୱାରା ବୁଝାଇ ଦିଅ ।

IV. "ଲୌହ ଖଣିରୁ ଜନ୍ମେ ।" "ଯେଉଁ ବ୍ୟକ୍ତିର ଧନ ଅଛି ସେ ସବୁ କରି ପାରେ ।"

(କ) କୃତ୍ ଓ ତଦ୍ଧିତ ପ୍ରତ୍ୟୟ ସାହାଯ୍ୟରେ ଉଦ୍ଧୃତିତ ବାକ୍ୟ ଦ୍ୱୟକୁ ସଂକ୍ଷେପରେ ଲେଖ ।
"ମନମଧ୍ୟରେ ବୋଧକୁ——ମାତ ଲୋକର କାର୍ଯ୍ୟ ଅଟେ ।"

"ପ୍ରତିଦିନ ପ୍ରାତଃକାଳରେ——ସ୍ୱାସ୍ଥ୍ୟପକ୍ଷରେ ଉତ୍ତମ ।"

(ଖ) ଉଦ୍ଧୃତିତ ଖଣ୍ଡବାକ୍ୟଦ୍ୱୟକୁ ପୂର୍ଣ୍ଣ କର ।

V. ଅଯୋଧ୍ୟାପ୍ରତ୍ୟାଗମନ କେଉଁ ଛନ୍ଦରେ ଲେଖା ହୋଇ-ଅଛି ? ତହିଁର ଲକ୍ଷଣ କଣ ? ରସକୋଇଲା ବୃତ୍ତ କବିତାବଳୀର କେଉଁ ଅଂଶରେ ଅଛି ? ତହିଁର ଲକ୍ଷଣ ଲେଖ । ପୂର୍ଣ୍ଣମିସିକ୍ଷର ଛନ୍ଦ କାହାକୁ କହ ? ଦୃଷ୍ଟାନ୍ତଦ୍ୱାରା ବୁଝାଇ ଦିଅ ।

VI. (କ) ଈଶ୍ୱରଙ୍କ ବପୁ ଓ ମହିମାର ବର୍ଣ୍ଣନା ଥିବ ଏପରି ଗୋଟିକାଏ ପଦ୍ୟ କବିତାବଳୀରୁ ଉଦ୍ଧୃତ କର ।

(ଖ) ଶକୁନ୍ତଳା ଉପାଖ୍ୟାନର ମର୍ମ୍ମ ସଂକ୍ଷେପରେ ଲେଖି ଯାଅ ଏବଂ ଶକୁନ୍ତଳା ଓ ଦୁଷ୍ମନ୍ତ ପ୍ରତ୍ୟେକେ ପରସ୍ପରଙ୍କ କାର୍ଯ୍ୟ ନିମନ୍ତେ କେତେ ପରିମାଣରେ ଦୋଷୀ ବୁଝାଇ ଦିଅ ।

TUESDAY, DECEMBER 16TH, 2 TO 5 P.M.

URIYA—TRANSLATION AND COMPOSITION.

I. Translation into Uriya.

II Subject of a short Essay in Uriya:—

The force of example for good or evil. (ମନୁଷ୍ୟମାନଙ୍କର ଉନ୍ନତି ଅବା ଅବନତି ସାଧନ ବିଷୟରେ ଦୃଷ୍ଟାନ୍ତର ବଳ) ।

III. Translate into English:—

(1) ପ୍ରଭାତଲ ବିଭାବରୀ, ହସିଲେ ଉଜ୍ଜ୍ୱଳେ,
ପଙ୍କଜ-ବରଣୀ ଉଷା ଉଦୟ ଅଚଳେ,
ନବୋଦିତ ଦିନମଣି ରକ୍ତିମ କିରଣ,
କାଞ୍ଚନ ଶିଖର ଚୂଡ଼ା ଚୁମ୍ବିଲ ବହନ,

ଝର ଝର ଝରେ ବଶି-ପଭଭ ଭୁଷାର,

ବୁଲ୍ ବଲେ ରଣ ସ୍ପଷ୍ଟ କଲେ ଯେ ଯାହାର ।

(2) ଆଦିମ ମାର୍କିନମାନେ ତାମ୍ରବର୍ଣ୍ଣ, ପ୍ରଲମ୍ବ-କେଶ ଏବଂ ସୁଶ୍ରୀକ । ଏମାନେ ମୃଗୟାଶୀଳ, କୃଷିବିମୁଖ ଏବଂ ଯୁଦ୍ଧ-ପ୍ରିୟ । ଏମାନଙ୍କର ବୈର-ପରାୟଣତା ଅତି ଭୟଙ୍କର ଅଟେ । ଏହି ଜାତିର କତିପୟ ଶାଖା ଅର୍ଦ୍ଧ ସଭ୍ୟ ଏବଂ ଅବଶିଷ୍ଟ ଘୋର ବର୍ବର ଭାବାପନ୍ନ ।

(3) ବୁର୍ଗାବଣ୍ଡ ମହୋବା ନାମକ ପ୍ରଦେଶର ଅଧିପତି ଚନ୍ଦେଲ ବଂଶୀୟ ରାଜା ଶାଲିବାହନଙ୍କର ଦୁହିତା ଥିଲେ । ଗଢ଼ରାଜ୍ୟର ରାଜା ଦଲପତି ସିଂହଙ୍କ ସଙ୍ଗରେ ତାଙ୍କର ପରିଣୟ ସମ୍ପାଦିତ ହୋଇ ଥିଲା । ରାଜା ଦଲପତି ଏକମାତ୍ର ପୁତ୍ର ବୀରନାରାୟଣର ଜନ୍ମ ଉତ୍ତାରେ ମାନବଲୀଳା ସମ୍ବରଣ କରି ଥିଲେ । ସୁତରାଂ ଦୁର୍ଗାବତୀଙ୍କୁ ରାଜ୍ୟର ସ୍ୱହସ୍ତରେ ଗ୍ରହଣ କରିବାକୁ ପଡ଼ି ଥିଲା । ସେ ରାଜକାର୍ଯ୍ୟ ପରିଚାଳନାରେ ଅସାଧାରଣ ସାହସ, ସାମର୍ଥ୍ୟ ଏବଂ ପ୍ରଭୁତ୍ୱ ପ୍ରଦର୍ଶନ କରି ଥିଲେ ।

FIRST EXAMINATION IN ARTS, 1884.

MONDAY, 15TH DECEMBER, 10 A.M. TO 1 P.M.

ENGLISH POETRY.

Paradise Lost, Book VI; The Tempest; The Princess.

I. It has been said that there is only one piece of pleasantry in Paradise Lost:—What passage in Book VI is referred to, and on what grounds may it be objected to?

II. Paraphrase the following passages so as to show clearly their meaning:—

(*a*) The sword of Michael * * met
The sword of Satan, with steep force to smite
Descending, and in half cut sheer; nor staid,
But, with swift wheel reverse, deep entering, shar'd
All his right side.

(*b*) Of evil, then, so small as easy think
The remedy; perhaps more valid arms,
Weapons more violent, when next we meet,
May serve to better us and worse our foes,
Or equal what between us made the odds,
In nature none.

(*c*) The invention all admir'd, and each, how he
To be the inventor missed; so easy it seem'd
Once found, which yet unfound, most would have thought
Impossible.

III. (*a*) What was Milton's meaning, and what is the present meaning of the following italicised words?—

(i) *reluctant* flames, (ii) *obvious* hill, (iii) the apostate *idol* of majesty divine, (iv) *obsequious* darkness.

(*b*) What was Shakespear's meaning, and what is the present meaning of the following italicised words:—

(i) allaying both their fury and my *passion*, (ii) a

living *drollery*, (iii) with *observation* strange, (iv) *sanctimonious* ceremonies.

IV. Contrast and compare the characters of Miranda and of the Princess Ida.

V. Explain the following italicised expressions :—

(*a*) Left me to a *bootless inquisition*.

(*b*) With a heart *as willing*
as bondage e'er of freedom.

(*c*) What is the time o' the day ?
Past the mid season. At least *two glasses*.

(*d*) 'Ere the *silver sickle of that month*
Became her golden shield.

(*e*) A *sail*
That brings our friends up from the underworld.

(*f*) To him
That sees *the midsummer midnight Norway sun*
Set into sunrise.

VI. Indicate briefly the chief characteristics of Ariel and Caliban in the Tempest, and of King Gama in the Princess.

VII. (*a*) Re-write the following passage in simple idiomatic prose :—

I have bedimmed
The noontide sun, called forth the mutinous winds,
And twixt the green sea and the azure vault
Set roaring war ; to the dread rattling thunder
Have I given fire, and rifted Jove's stout oak
With his own bolt ; the graves at my command
Have waked their sleepers, oped and let 'em forth
By my so potent art. But this rough magic
I here abjure, and when I have required
Some heavenly music, which e'en now I do,
To work mine end upon their senses that
This airy charm is for, I'll break my staff,
Bury it certain fathoms in the earth,
And deeper than did ever plummet sound
I'll drown my book.

(*b*) Quote the passage beginning :—These our actors
As I foretold you were all spirits and
Are melted into air, into thin air.

VIII. Justify the title of the Princess as a "Medley."

IX. Paraphrase the following passages so as to shew clearly their meaning :—

(*a*) I stood and seemed to hear
A strangled titter, out of which there brake
On all sides, clamouring etiquette to death,
Unmeasured mirth ; while now the two old kings
Began to wag their baldness up and down,
The fresh young captains flash'd their glittering teeth,
The huge bush-bearded barons heaved and blew,
And slain with laughter rolled the gilded squire

(*b*) Ask me no more ; the moon may draw the sea ;
The cloud may stoop from heaven and take the shape,
With fold to fold, of mountain or of cape ;
But O too fond, when have I answered thee ?

X. (*a*) Mark off the feet in the following lines, and point out any peculiarity in the scanning of each :—

(i) Ministering spirits trained up in feast and song.

(ii) Uriel and Raphael his vaunting foe.

(iii) Training his devilish enginery impaled.

(iv) Go make thyself like a nymph o' the sea, be subject.

(v) He thinks me now incapable, confederates.

(vi) And were the king on't what would I do.

(*b*) Explain the construction in the following italicised words and passages :—

(i) Forthwith or all sides to his aid *was run*
By angels.

(ii) What stood, recoiled,
Defensive scarce.

(iii) In the dark *backward* and abysm of time.

(iv) Be quick
Thou'rt best.

MONDAY, 15TH DECEMBER, 2 TO 5 P.M.

ENGLISH PROSE.

Black's Goldsmith: Green's Readings, Part II.

I. (1) "Goldsmith has sometimes been represented as a man of genius, cruelly treated by the world, and doomed to struggle with difficulties which at last broke his heart." Give a concise statement of the actual facts of the case.

(2) "It may seem strange that a man who wrote with such perspicuity, vivacity, and grace, should have been, whenever he took part in conversation, an empty, noisy, blundering rattle." Carefully summarize Black's reply to charges of this nature.

II. (1) Mention the chief literary merits of *The Traveller*. What opinion was expressed regarding it by Johnson and by Charles Fox?

(2) "The *Vicar of Wakefield*, considered structurally, follows the lines of the Book of Job." Explain this statement. What faults in connexion with the structure of the plot are pointed out in your text?

III. (1) State and explain Johnson's dictum on the subject of fame, and mention a remark of Bentley's, in connexion with the same subject, that he often repeated.

(2) On two occasions Goldsmith had offers of patronage from persons in power. Relate what happened on *either* of these occasions.

(3) Give a sketch of Garrick's character as it may be gathered from the portion of *Retaliation* quoted in your text.

IV. (1) Write short notes on the italicised portions of—

(*a*) It is possible that the two actors introduced some vulgar *gag* into their parts.

(*b*) A *halcyon period* of Goldsmith's life.

(*c*) He paid but little respect to *the unities*.

(*d*) His name has been used to glorify a sham *Bohemianism*.

(2) Explain the following allusions :—

(*a*) The Joseph Surfaces and Charles Surfaces of the world.

(*b*) It was not given to Goldsmith to feel "like the monument" on any occasion.

(*c*) It must be confessed that in this direction he was somewhat of an Autolycus.

(*d*) The intervention of the superior gods was just as successful as a Homeric cloud.

V. (1) Give the meaning of—(*a*) going further to fare worse, (*b*) to boil down books, (*c*) a wilderness of slums, (*d*) the key-hole and back-door element of human nature, (*e*) wise blindness, and (*f*) idle industry.

(2) (*a*) "When we are invited to contemplate the 'evil destinies of men of letters,' we ought to be shown the flood-tides as well as the ebb-tides." What does Black mean by the *flood-tides* and the *ebb-tides*, and how does he illustrate his meaning?

(*b*) "Honours to one in my situation are something like ruffles to a man that wants a shirt." Paraphrase the passage, and say what Goldsmith was referring to when he wrote it.

VI. (1) Mention (*a*) a few of the services rendered by Caxton to higher literature, and (*b*) the difficulties he experienced in the choice of English for the work of translation.

(2) "If there is any truth in Jonson's statement that Shakspere never blotted a line, there is no justice in the censure which it implies on his carelessness or incorrectness." Why? What did Greene mean by speaking of Shakspere as an "upstart crow beautified with our feathers?"

VII. (1) Explain clearly how it happened that such men as More and Warham were so hostile to the introduction into England of Tyndale's translation of the Bible.

(2) How does Macaulay show that the power of Napoleon was inferior to that of Philip II.? For what does

he say Italy, Germany, and Spain were each famous in the sixteenth century?

VIII. Paraphrase:—

(*a*) I will not pause to relate the great superfluous expense. It was such that many wore their mills, their forests, and their meadows, upon their backs.

(*b*) The Lord-Admiral, who had been lying off and on, now bore away with all his force in pursuit of the Spaniards.

(*c*) We are befooled by names. Call him Crusader instead of Roundhead, and he seems at once (granting him only sincerity which he had, and that of a right awful kind) as complete a knight-errant as ever watched and prayed, ere putting on his spurs, in fantastic Gothic chapel, beneath "storied windows richly dight."

(*d*) His face was dashed with paleness, and his body stooped with its own infirmities even more than with its master's cares.

IX (1) What is meant by—(*a*) Lollardry, (*b*) Men of the New Learning, (*c*) Euphuism, and (*d*) the Renascence?

(2) Write down LaHire's prayer, and name "the sacred city of the Reformation." Who are referred to under the following appellations—(*a*) the pupil of Coligny, (*b*) the Golden Duke, and (*c*) the last of the Elizabethans?

TUESDAY, 16TH DECEMBER, 10 A.M. TO 1 P.M.

ENGLISH LANGUAGE.

I. Paraphrase:—

A Poet's Epitaph.

Stop Mortal! Here thy brother lies,
  The Poet of the Poor.
His books were rivers, woods, and skies,
  The meadow and the moor;
His teachers were the torn hearts' wail,
  The tyrant and the slave,
The street, the factory, the jail,
  The palace—and the grave!

The meanest thing, earth's feeblest worm,
He feared to scorn or hate;
And honoured in a peasant's form
The equal of the great.
But if he loved the rich who make
The poor man's little more,
Ill could he praise the rich who take
From plundered labour's store.
A hand to do, a head to plan,
A heart to feel and dare—
Tell man's worst foes, here lies the man
Who drew them as they are.

II. Write notes pointing out and explaining any peculiarities of grammar, idiom, or etymology in the italicised expressions.—

(1) Woe *worth* the day.
(2) They have made *them* a molten calf.
(3) Must I *needs* forego
So good, so noble, and so true a master.
(4) The *riches* of the ship is come on shore.
(5) And do you now strew flowers in his way
That comes in triumph over Pompey's blood.

III. Correct the sentences given below and point out concisely the nature of the errors in them:—

(1) He was more beloved but not so much admired as Cinthio.

(2) It is owing to his advice that the general plan of the campaign, afterwards carried into execution, is to be ascribed.

(3) I cannot excuse the remissness of those whose business it should have been, as it certainly was their interest, to have interposed their good offices.

(4) Severe the doom that length of days impose,
To stand and witness of unnumered woes.

(5) Friendship is a great solace to us in the midst of the rude tempests with which we are assailed in the battle of life.

(6) The great original author of Hudibras has been censured for exposing to ridicule Sir Samuel Luke, under whose roof he dwelt, in the grotesque, character of his hero.

IV. Bring out clearly the meaning of any four of the following extracts by re-writing them in simpler English:—

(1) He hath a killing tongue but a quiet sword.

(2) Ambition breaks the ties of blood, and forgets the obligations of gratitude.

(3) Thrice is he armed that hath his quarrel just,
And he but naked though locked up in steel,
Whose conscience with injustice is corrupted.

(4) The heights by great men reached and kept,
Were not attained by sudden flight;
But they, while their companions slept,
Were toiling upward in the night.

(5) Those who are quite satisfied sit still and do nothing; those who are not quite satisfied are the sole benefactors of the world.

(6) Perhaps there are few less happy than those who are ambitious without industry; who pant for the prize but will not run the race; who thirst for truth, but are too slothful to draw it up from the well.

V. Give the meanings of any *two* of the proverbs that follow and compose a short story in illustration of *one* of the two you select.

(1) Ill weeds grow apace.

(2) It's a long lane that has no turning.

(3) A rolling stone gathers no moss.

(4) A stitch in time saves nine.

(5) There's no smoke without fire.

(6) A bird in the hand is worth two in the bush.

VI. (*a*) Give the derivations of:—*Gymnastics*, *martial*, *candidate*, *furlong*, *intoxicate*, *verdict*.

(*b*) What English words are suggested by the following old customs?—

(1) It was anciently the custom with buyers and sellers to break a straw (*stipula*) between them.

(2) These words descend to us from a period when it was the custom to *thrill* or drill the ear of a slave in token of servitude.

(3) It used to be the custom in ancient days to weigh out (*ex pendere*) instead of counting money as we now do.

(4) When a Roman general returned victorious a triumph was granted him; he was drawn in a chariot to the Capitol and a bull was sacrificed in his honor: but when his deeds were of less merit only a sheep (*ovis*) was sacrificed.

VII. Write two short letters of about half a page each:—

(1) Asking a superior for an interview.

(2) Telling your father or some relative that you have obtained employment, and the nature of it.

VIII. Write an Essay of not more than four pages in length on *one* of the following topics:—

(1) The advantages of Commerce.

(2) Travelling as necessary to a complete Education.

(3) The utility of Railways.

(4) Cleanliness in relation to Health.

TUESDAY, 16TH DECEMBER, 2 TO 5 P.M.

PHYSIOLOGY.

I. Explain how the temperature of the body is regulated.

II. Describe briefly the structure of the stomach, and explain what part this organ takes in the process of digestion.

III. Describe the course of the circulation of the blood.

IV. Supposing a man climbs a steep hill, state the effects of such exercise, (*a*) on his muscles, (*b*) on his blood, (*c*) on his excretions.

V. Why are the kidneys necessary? What are the peculiarities in the circulation of the blood in these organs? To what extent can the skin perform their functions?

VI. Enumerate the differences between inspired and expired air; explain how these are to be accounted for.

VII. State the immediate influences at work in the production of asphyxia. Describe experiments illustrative of the relative importance of these influences.

VIII. What purposes are served (*a*) by the muscular fibres, (*b*) by the elastic tissue in the walls of the arteries? Contrast the manner in which blood flows from a wounded vein with that in which it flows from a wounded artery.

IX. Give the necessary conditions for the arterial blood to become venous in passing through the capillaries. What is the colour of the blood returning from the skin, kidneys, and lungs respectively.

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

SANSKRIT: TEXT-BOOKS AND GRAMMAR.

[*The answers are to be given either in English or Sanskrit, but not in any of the Vernaculars.*]

उत्तररामचरितं

I. (*a*) Paraphrase:

(1) तत्कालं प्रियजनविप्रयोगजन्मा
तीव्रोपि प्रतिकृतिवाञ्छया विसोढः ।
दुःखाग्निर्मनसि पुनर्विपच्यमानो
हृन्मर्मव्रण इव वेदनां करोति ॥

(2) अतरुणमदताण्डवोत्सवान्ते-
ष्वयमचिरोद्धृतमुग्धलोलबर्हः ।
मणिमुकुट इवोच्छिखः कदंबे
नदति स एष वधूसखः शिखण्डी ॥

(3) दिनकरकुलचन्द्र चन्द्रकेतो
सरभसमेहि दृढं परिष्वजस्व ।

तुहिनशकलशीतलैस्तवाङ्गैः
शममुपयातु ममापि चित्तदाहः ॥

Explain the composition of the words underlined
What is the context of these verses?

(*b*) Explain

(1) सैनिकानां प्रमाथेनसत्यमोजायितं त्वया।
जामदग्न्यस्य दमने नैवं निर्वक्तुमर्हसि ॥

(2) विद्याकल्पेन महता मेघानां भूयसा-
मपि।
ब्रह्मणीव विवर्त्तानां क्वापि विप्रलयः
कृतः ॥

(3) वज्रादपि कठोराणि मृदूनि कुसु-
मादपि।
लोकोत्तराणां चेतांसि को हि विज्ञातु-
मर्हति ॥

II (*a*) How is the reunion of Sītā with Rāma effected?

(*b*) Is there any Brahminical custom referred to in this text that has now gone into disuse? (शुक्रनीतिः)

III (*a*) Define the terms दीर्घदर्शिन्, प्रत्युत्पन्नमति, संविद्दानं, आचारदानं, यावनमतं.

(b) नविद्यया नशौर्य्येण धनेनाभिजनेनच, नबलेन, &c. What is severally the effect of these qualities upon the good and the bad?

(c) To whom is charity to be given?

(d) वशीकुर्य्याज्जगत्सदा. What are the means to be employed for this purpose?

(e) Enumerate the व्यसनानि.

(f) गृहिणां हि सुखायालं दशैतानि न चान्यथा. Which are these ten?

(g) Distinguish between विद्या - कला; मन्त्र - ब्राह्मण; अस्त्रं-शस्त्रं; अर्धः-अर्धं.

IV. (a) Explain:

(1) मालाकार इव ग्राह्यो भागो नाङ्गार-कारवत् ॥

(2) उत्पथं प्रतिपन्नस्य कार्य्यं भवतिशासनं ॥

(3) तिमिङ्गिलगिलोप्यस्ति तद्गिलोप्यस्ति राघवः।

कश्चित्तु तद्गिलोऽस्तीति मत्वा मन्येत कर्हिचित् ॥

(b) Quote passages from your text parallel to the following:

(1) अतिसर्वत्रवर्जयेत् ॥

(2) वरमेकोगुणी पुत्रो न च मूर्खशतैरपि ॥

(3) यथा राजा तथा प्रजा ॥

(4) दोषा गुणा गुणा दोषास्सधने निर्धने तथा ॥

(5) वित्तस्य चार्जने दुःखंदुःखं संरक्षणेपिच॥

(6) सेवेत विषयान् काले मुक्त्वा तत्परतां वशी ॥

(7) शब्दःस्पर्शश्च रूपञ्च रसो गन्धश्च पञ्चमः ।

एकैकमलमेतेषां विनाशप्रतिपत्तये ॥

(8) अज्ञस्सुखमाराध्यस्सुखतरमाराध्यते विशेषज्ञः ।

ज्ञानलवदुर्विदग्धं ब्रह्मापि नरं न रञ्जयति॥

V. (a) Give the meanings of अनुवाकहत, सरिन्माहक, निगड, द्राक्, सुरापी, वेध्य, आरात्, ओलच्छाभः

(b) Give equivalent Sanskrit words for interest on money, debtor, creditor, interest, discount, capital, saddle, bribe, usury.

VI. Correct the following and re-write :

अत्रदेशे कश्चिद्राजाभूत्, इयं बहुधनधान्यसम्पन्नः, तस्यमित्रा अमात्याश्च बहवोआसुः, सः कदाचित्मृगयंगच्छत् म्लेच्छंकञ्चनावीक्षत, तस्यचसौवर्णमेकंददौ.

VII. (a) Give (1) the third person singular, lun, of परितुष्यति, पश्यति, अध्येति and (2) the third person singular, dual, and plural, lan, of याति, हन्ति, वेत्ति, अध्येति.

(b) Give the lat (third person singular) of वि + रम्, वि + जय् + प्र + स्था, वि + वद्, अनु + कृ.

VIII. (a) What is peculiar in the following? प्रौढः, परस्परः, प्रतीपः, उत्पथः, कर्णेजपः.

(b) Explain the forms करदीकृत्य, गुणायत्तेदज्या.

(c) Give four verbs that have the same peculiarity of conjugation as स्वप्.

(d) Give three verbs that substitute क्ष for the final म् of the root.

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P.M.

SANSKRIT: TRANSLATION.

I. Translate into English:

रामः। हा कष्टमतिवीभत्सकर्मा नृशंसोऽस्मि संवृत्तः। शैशवात् प्रभृति पोषितां प्रियां सौहृदादपृथगाश्रयामिमाम्। छद्मना परिददामि मृत्यवे सौनिकोगृहशकुन्तिकामिव॥ तत्किमित्यस्पर्शनीयः पातकी देवीं दूषयामि। (सीतायाः शिरः खैरमुन्नमय्य बाहुमाकर्षन्)

अपूर्वकर्मचाण्डालमयि मुग्धे विमुञ्च माम्।
श्रितासि चन्दनभ्रान्त्या दुर्विपाकं विषद्रुमम्॥
कण्डूलद्विपगण्डपिण्डकषणोत्कम्पेन सम्पातिभिर्घर्मस्रंसितबन्धनैः स्वकुसुमैरर्चन्ति गोदावरीम्।
छायापस्किरमाणविष्किरमुखव्याकृष्टकीटत्वचः।
कूजत्क्लान्तकपोतकुक्कुटकुलाः कूले कुलोपद्रुमाः॥

सौधातके! दृश्यतामद्य भूयिष्ठसन्निधापितातिथिजनस्य समधिकारम्भरमणीयता भगवतो वाल्मीकेराश्रमपदस्य। तथाहि।

नीवारौदनमण्डमुष्णमधुरं सद्यः प्रसूतप्रिया-
पीतादप्यधिकं तपोवनमृगः पर्याप्तमाचामति।
गन्धेन स्फुरता मनागनुसृतो भक्तस्य सर्पिष्मतः
कर्कन्धूफलमिश्रशाकपचनामोदः परिस्रीयते॥

रामः। वत्स! सरहस्यप्रयोगसंहरणान्यस्त्राण्याम्नाय-
वन्ति।

ब्रह्मादयोब्रह्महिताय तप्त्वा परःसहस्राः शरद-
स्तपांसि।

एतान्यपश्यन् गुरवः पुराणाः स्वान्येव तेजांसि
तपोमयानि॥

अथैतन्मन्त्रपारायणोपनिषदं भगवान् कृशाश्वः
परःसहस्रपरिवत्सरान्तेवासिने कौशिकाय विश्वामि-
त्राय प्रोवाच स तु भगवान् मह्यमित्येषतु पूर्वानुक्रमः

दुर्गुणं तु गुणीकृत्य कीर्तयेत् स प्रियो भवेत्।
गुणाधिक्यं कीर्तयति यः किं स्यान्न पुनस्सखा॥
दुर्गुणं वक्ति सत्येन प्रियोऽपि सोऽप्रियो भवेत्।
गुणं हि दुर्गुणीकृत्य वक्ति यस्स्यात् कथं प्रियः॥

स्तुत्या वशं यान्ति देवा ह्यञ्जसा किं पुनर्नराः।
प्रत्यक्षं दुर्गुणान्नैव वक्तुं शक्नोति कोऽप्यतः॥
स्वदुर्गुणान् स्वयं चातो विमृशेल्लोकशास्त्रतः।
स्वदुर्गुणश्रवणतो यस्तुष्यति न क्रुध्यति॥
स्वोपहासप्रविज्ञाने यतते त्यजति श्रुते।
स्वगुणश्रवणान्नित्यं समस्तिष्ठति नाधिकः॥
दुर्गुणानां स्वनिरहं गुणाधानं कथं मयि।
मय्येव चाज्ञताप्यस्ति मन्यते सोऽधिकोऽखिलात्॥
चतुर्धा भेदिता जातिर्ब्रह्मणा कर्मभिः पुरा।
तत्तत्सांकर्यासांकर्यात् प्रतिलोमानुलोमतः।
जात्यानंत्यं तु संप्राप्तं तद्वक्तुं नैव शक्यते॥
मन्यन्ते जातिभेदं ये मनुष्याणां तु जन्मना।
त एव हि विजानंति पार्थक्यं नामकर्मभिः॥
जरायुजांडजा स्वेदोद्भिज्जा जातिस्तु संग्रहात्।
उत्तमो नीचसंसर्गाद्भवेन्नीचस्तु जन्मना॥॥
नीचो भवेन्नोत्तमस्तु संसर्गादापि जन्मना।
कर्मणोत्तमनीचत्वं कालतस्तु भवेद्गुणैः।
विद्याकलाश्रयेणैव तन्नाम्ना जातिरुच्यते॥

वधेन संख्ये पिशिताशनानां क्षत्रान्तकस्याभिभवेन चैव।

आढ्यम्भविष्णुर्यशसा कुमारः प्रियम्भविष्णुर्न स यस्य नासीत्॥

ततः सुचेतीकृतपौरभृत्यो राज्येऽभिषेक्ष्ये सुतमित्यनीचैः।

आघोषयन् भूमिपतिः समस्तं भूयोपि लोकं सुमनोचकार॥

II. Translate into Sanskrit:

When Alexander invaded India, the religion of the Hindus had become much debased from the pure and simple faith of the Vedas. Widows occasionally burned themselves on the funeral pyres of their husbands; but women do not appear to have been secluded. There were religious devotees and their monasteries, and other classes of mendicants, who, in pursuance of vows, underwent the most frightful penances. The power of the Brahman priesthood in all spiritual matters was very great, and they were esteemed holy, as yet they had not adopted secular employments, and lived apart as professors of religion. There is no mention of the Buddhist schism, which appears to have been unknown to the Greeks. Several great kingdoms existed in India, and many smaller principalities and states, most or all of which were dependent from the larger ones. It must be remembered, however, that the Greeks knew only of the kingdoms of Northern India; all to the south of the boundary of Hindostan Proper was as yet unknown.

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

LATIN: TEXT-BOOKS AND GRAMMAR.

I. (*a*) Decline in the singular *Orpheus*, *Achilles*, *Amphion*, *Lipare*.

(*b*) Write in all cases and both numbers the Latin for "Nobody."

(*c*) Mention six Latin nouns that have in the plural a meaning different from that which they have in the singular.

(*d*) What is the gender of the following words:—*pecus*, *carcer*, *crus*, *vertex*, *vestis*, *margo*, *cardo*, *tellus*, *laurus*?

(*e*) Give the accusative plural of *pauper*, *cadaver*, and *palus*, and the genitive (singular and plural) of *socer*, *alius*, *manus*, *auceps*, *præses*, and *senex*.

(*f*) Compare *frugi*, *celer*, *beneficus*, *graviter*, *secus*, *providus*, and *vetus*; and mention six superlatives that have no positives.

(*g*) Give the perfect, supine, and infinitive of *lino*, *tundo*, *trudo*, *illido*, *ascendo*, *pendo*, *trado*, *mordeo*, *aperio*, *figo*, *fingo*, *findo*, *meto*.

II. (*a*) What cases do the adjectives *avidus*, *dives*, *utilis*, *edax*, *alienus*, the verbs *damno*, *obliviscor*, *indigeo*, *consulo*, and the prepositions *pone*, *citra*, *super*, *obviam*, *subter* govern respectively?

(*b*) How is the want in Latin of a perfect participle active supplied?

(*c*) Give examples of "dativus commodi," "objective genitive," and "partitive genitive."

(*d*) Correct the following:—

(i) Permittitur facere quod vellet.

(ii) Spero breviter ex rure redire.

(iii) Secutus est a decem mille nostris hominibus.

III. Distinguish between—

Veni ut sciam, veni ut scirem; cavere aliquem, cavere alicui, cavere ab aliquo; pocula *bina*, crateraque *duo*, statuam; positurum esse, positum iri; excubiæ, vigiles, custodiæ, stationes; mens, indoles; carere, egere.

IV. Put the following into *Oratio Obliqua* :—

"At enim eo fœdere quod cum Hasdrubale ictum est Saguntini excipiuntur. Adversus quod ego nihil dicturus sum nisi quod a vobis didici: vos enim, quod C. Lutatius Consul primo nobiscum fœdus fecit, quia neque auctoritate patrum, nec populi iussu ictum erat, negastis vos eo teneri · itaque aliud de integro fœdus publico consilio ictum est. Si vos non tenent fœdera vestra, nisi ex auctoritate aut iussu vestro icta, ne nos quidem Hasdrubalis fœdus, quod nobis insciis fecit, obligare potuit. Proinde omittite Sagunti atque Hiberi mentionem facere, et quod diu parturit animus vester, aliquando pariat."

V. Translate :—

"Romam, caput orbis terrarum, petentibus quidquam adeo asperum atque arduum videri, quod inceptum moretur." What anachronism is there in this speech?

VI. (*a*) Translate and remark on the construction of the words in italics :—

(i) Quid adferebat festinationis quod heres *erat*? Quod ut sciret Milo illum *Ariciæ* fuisse, suspicari tamen debuit eum * * * reversurum. Primum erat nihil cur *properato opus esset*.

(ii) Ianum Quirini clausit et ordinem
Rectum *evaganti* frena licentiæ
Iniecit, emovitque culpas
Et veteres revocavit artes.

(*b*) Give the name and structure of the metre of the above extract, and state to whom the extract refers.

(*c*) Give examples of Greek constructions used by Vergil and Horace.

VII. Write concise explanatory notes on—

Conquisitores, lustratio, pulvinaria, lectisternium, supplicatio, forum litibus orbum, Lex Plotia, religio.

VIII. Explain the allusions in—

(*a*) "Non. . . . . .
Primusve Teucer tela Cydonio
Direxit arcu."

(*b*) "Ityn flebiliter gemens."

(*c*) "Qui dies mensem Veneris marinæ
Findit Aprilem"

(*d*) "Ob cetera prodigia, libris adire decemviri iussi."

(*e*) "Calceos mutare."

(*f*) "Comites Græculi."

(*g*) "Calabræ Pierides."

IX. Translate, commenting on the allusions and (as far as regards the words in italics) also on the grammar:

(*a*) "Tum Phaéthontiadas *musco circumdat amaræ*.
Corticis atque solo proceras *erigit alnos*."

(*b*) "*Has herbas atque hæc* Ponto mihi lecta *venena*.
Ipse dedit Mœris"

(*c*) "Daphni, quid *antiquos signorum* suspicis *ortus*?
Ecce Dionæi processit Cæsaris astrum."

(*d*) "Canto quæ *solitus* siquando armenta *vocabit*.
Amphion Dircæus in Actæo Aracyntho."

and remark on any peculiarity in the scansion of the last line.

X. "Has tantas viri virtutes ingentia vitia æquabant." Who is the "*vir*" alluded to; what were the "virtutes" and "ingentia vitia"?

XI Translate into Latin:—

(1) Happiness is possible.

(2) I don't know what he is doing.

(3) Three days after his arrival in Sicily, he sent an army to aid our men.

(4) Caius, who was unaccustomed to be evil-spoken of, took it to heart.

(5) He is too proud to repent of his wrong-doing.

(6) The second of January 1884.

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P.M.

LATIN: TRANSLATION.

I. Translate into English the following passages:—

(*a*) De grege non ausim quidquam deponere tecum;
Est mihi namque domi pater, est injusta noverca;

Bisque die numerant ambo pecus, alter et hædos.
Verum, id quod multo tute ipse fatebere majus,
(Insanire libet quoniam tibi) pocula ponam
Fagina, cælatum divini opus Alcimedontis,
Lenta quibus torno facili superaddita vitis
Diffusos hedera vestit pallente corymbos;
In medio duo signa: Conon, et, quis fuit alter,
Descripsit radio totum qui gentibus orbem,
Tempora quæ messor, quæ curvus arator haberet?
Necdum illis labra admovi, sed condita servo.

(b) *Lyc.* Quid, quæ te pura solum sub nocte canentem
Audieram? numeros memini, si verba tenerem.
Mœ. Daphni, quid antiquos signorum suspicis ortus?
Ecce Dionæi processit Cæsaris astrum,
Astrum quo segetes gauderent frugibus, et quo
Duceret apricis in collibus uva colorem.
Insere, Daphni, piros; carpent tua poma nepotes.
Omnia fert ætas, animum quoque; sæpe ego longos
Cantando puerum memini me condere soles.
Nunc oblita mihi tot carmina; vox quoque Mærim
Jam fugit ipsa; lupi Mærim videre priores.
Sed tamen ista satis referet tibi sæpe Menalcas.

(c) Adduxere sitim tempora, Vergili;
Sed pressum Calibus ducere Liberum
Si gestis, juvenum nobilium cliens,
Nardo vina merebere.
Nardi parvus onyx eliciet cadum,
Qui nunc Sulpiciis accubat horreis,
Spes donare novas largus amaraque
Curarum eluere efficax.
Ad quæ si properas gaudia, cum tua
Velox merce veni: non ego te meis
Immunem meditor tingere poculis,
Plena dives ut in domo.
Verum pone moras, et studium lucri,
Nigrorumque memor, dum licet, ignium
Misce stultitiam consiliis brevem:
Dulce est desipere in loco.

(d) Terret ambustus Phaëthon avaras
Spes, et exemplum grave præbet ales

Pegasus terrenum equitem gravatus
Bellerophontem,
Semper ut te digna sequare, et, ultra
Quam licet sperare nefas putando,
Disparem vites.

(*e*) (Not from the text-books.)

Ante omnia ne sit vitiosus sermo nutricibus. * * * * * * Has primum audiet puer, harum verba effingere imitando conabitur. Et natura tenacissimi sumus eorum, quæ rudibus annis percepimus; ut sapor, quo nova vasa imbuas, durat; nec lanarum colores, quibus simplex ille candor mutatus est, elui possunt. Et hæc ipsa magis pertinaciter hærent, quæ deteriora sunt. Nam bona facile mutantur in pejus; quando in bonum verteris vitia?

(*f*) Quem igitur cum omnium gratia noluit, hunc voluit cum aliquorum querela? Quem jure, quem loco, quem tempore, quem impune non est ausus, hunc injuria, iniquo loco, alieno tempore, periculo capitis, non dubitavit occidere? Præsertim, judices, quum honoris amplissimi contentio, et dies comitiorum subesset; quo quidem tempore (scio enim quam timida sit ambitio, quantaque et quam solicita cupiditas consulatus) omnia non modo quæ reprehendi palam, sed etiam quæ obscure cogitari possunt timemus; rumorem, fabulam fictam, falsam perhorrescimus; ora omnium atque oculos intuemur; nihil enim est tam molle, tam tenerum, tam aut fragile, aut flexibile, quam voluntas erga nos sensusque civium; qui non modo improbitati irascuntur candidatorum, sed etiam in rectis factis sæpe fastidiunt.

(*g*) Inde oppugnatio eos aliquanto atrocior, quam ante, adorta est; nec, qua primum aut potissimum parte ferrent opem (quum omnia variis clamoribus streperent) satis scire poterant. Ipse Hannibal, qua turris mobilis, omnia munimenta urbis superans altitudine, agebatur, hortator aderat. Quæ quum admota, catapultis ballistisque per omnia tabulata dispositis, muros defensoribus nudasset, tum Hannibal, occasionem ratus, quingentos ferme Afros cum dolabris ad subruendum ab imo murum mittit. Nec erat difficile opus, quod cæmenta non calce durata erant, sed interlita luto, structuræ antiquæ genere. Itaque latius, quam cæderetur, ruebat; perque patentia ruinis agmina armatorum in urbem vadebant.

(*h*) Simul itaque (quanquam de industria morati cursum navium erant Carthaginienses, ut ante lucem accederent Lilybæum) præsensum tamen est, quia et luna pernox erat, et sublatis armamentis

veniebant; extemplo datum e speculis signum, et in oppido ad arma conclamatum est, et in naves conscensum. Pars militum in muris portarumque in stationibus, pars in navibus erant. Et Carthaginienses, quia rem fore haud cum imparatis cernebant, usque ad lucem portu se abstinuerunt, demendis armamentis eo tempore aptandaque ad pugnam classe absumpto. Ubi illuxit, recepere classem in altum, ut spatium pugnæ esset, exitumque liberum e portu naves hostium haberent. Nec Romani detrectavere pugnam, et memoria circa ea ipsa loca gestarum rerum freti, et militum multitudine ac virtute

II. Translate into Latin the following:—

I am glad to hear of your safe arrival at Rome. I am always anxious to see you, and especially just now. I shall stay a few more days at Tusculum, that I may finish a little work I have in hand; for I am afraid that, if I break it off when I have all but completed it, I shall find it difficult to take it up again. Meanwhile, that I may lose no time, I send off this letter, so to speak, in advance of me, to ask a favour of you which I shall soon ask in person.

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

PERSIAN: TEXT-BOOKS AND GRAMMAR.

I. (*a*) Give a brief account of Nizámí and name some of his prose works.

(*b*) In the Sekandar Námah there are دري الفاظ
Give some examples.

II. * خُدايا جهان پادشائی ترا است *
* زما خدمت آيد خُدائی ترا است *

(*a*) Account for the elision of ه in پادشاه and for the introduction of the همزه

(*b*) Show the ردیف and the قافیه

(*c*) Point out the قلب إضافت

(*d*) Is خُدا a مفرد or a مرکب word? If the latter, explain it.

(e) Analyse the couplet.

III. * علم بر کش اي آفتاب بلند *
* خرامان شو اي ابر مشکین پرند *
* بنال اي دل رعد چون کوس شاه *
* بخند اي لب برق چون صبح گاه *
* ببار اي هوا قطرهٔ ناب را *
* بگیر اي صدف در کن آن آب را *
* برا اي در از قعر دریاي خویش *
* بتاج سر شاه کن جاي خویش *
* شهي کارزومند معراج اوست *
* زمین بوس او درة التاج اوست *

(a) Give the metaphorical meaning of the underlined words and phrases.

(b) Write out the Arabic words in the above, and give their Persian equivalents.

(c) Give the تقطیع of any one of the lines.

IV. Give the English meanings of—

چراغ سپهر — حل وعقد امور — مهواري شدن — ارش — یمکن — نمازی کردن — کوسه — قراضه — گردن نهادن — هاروني — صخرهٔ صماد — پا افشردن — دم گرگ — گاؤدم — سگِ کیست — همداستان شدن *

V. Give the several meanings of each of the following words:—

هوا — پي — نحو — پرداخته — استخوان — ساعت — عین — ماندن *

VI. Put the correct اعراب to each of the following words, and state clearly the reason for each short vowel you so put:—

کنون — فزون — برون — نشتر — فتادن — حرا — سکندر — کش (مخفف که اش)

VII. Distinguish between—

مقدر and محذوف : ساکن and موقوف

VIII. * بریشم تني بلکه لولو سمی *

* روندہ چو لولو بر ابریشمي *

* ستون شد خردمند از پشت او *

* مه انگشت کش گشت زانگشت او *

زسم ستوران در ان پهن دشت *

* زمین شش شد و آسمان گشت هشت *

*بشب رنگي ان شب چرا گشت مست *

* چو ماه آمده شب چراغي بدست *

* از آئینهٔ پیل و زنگ شتر *

* صدف را شبه رسته بر جاي در *

* گرفته مزن بر حریف افگني *

* گرفته شوي گر گرفته زني *

(a) Explain in English the 1st and 5th couplet.

(b) Point out the صنائع

IX. Give in an easy colloquial Persian style the purport of any one of the following stories:—

دزدان که گوسفند زاهد را بحیله بردند - مار ضعیف که بمصلحت مرکب غوک شد - کنجشک که از مار انتقام گرفت - پادشاه و بوزنه و دزد *

X. Form adjectives from—

نقره — کاغذ — سرمه — آهن — دهلي — بني -

بنگاله — شوق *

XI. Define and illustrate by examples—

مجاز — بدل — مفعول فيه — تميز — حال —

تاکيد لفظي — جملهٔ مستانفه — ذوقافيتين *

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P.M.

PERSIAN: TRANSLATION.

I. Translate into Persian :—

(*a*) The confiscated lands scattered over the province were administered by agents of the State, and the profits shared between the captors and the Crown. The prize domains of Kufa—conquered, that is to say, by the armies of Khalid and of Sad—were much more extensive than those of Bussorah. Shortly, after it was founded, the inhabitants of Bussorah sent a deputation to urge that its endowments should be increased, and its income made more adequate to their responsibilities. "Kufa," said Ahraf, the spokesman from Bussorah, "is a well-watered garden which yieldeth in season its harvest of dates, while ours is a brackish land. Part bordereth on the desert, and part on the sea, which washes it with a briny flood. Compared with Kufa, our poor are many, and our rich are few. Grant us, therefore, of thy bounty." Recognising the justice of the demand, Omar made a substantial addition to the endowments of Bussorah. But, although Kufa was richer, it had heavier obligations to discharge than the sister city. Its Government had a far wider range; and the charges of four lieutenants, posted with strong garrisons at Holwan and Masbazan in the east, at Mosul in the north and at Kirokesia in the west, had to be provided from the resources at the command of Sad.

(*b*) I always feel sick on a voyage. There is no head-band to this book. Tell the boy to hold his tongue. The roads in Madras are not paved. We ascended the ghaut at night. The carriage roads in Bangalore are good.

II. Translate into English :—

(*a*)

* ستمگر سیاهي ز راچه بنام *
* ز لشکرگه زنگ بکشاد گام *
* درآمد چو پیل استخواني بدست *
* کز و پیل را استخوان مي شکست *
* سیه ماري افسون گرگي درو *
* سر آماسي از سر بزرگي درو *
* بسي خویشتن را بزنگي ستود *
* که سوزان تر از آتشم زبر دود *
* ز راچه منم پیل پولاد خای *
* که بر پشت پیلان کشم پیل پاي *
* چو در پیل پائي قدح مي کنم *
* بیک پیل پا پیل را بي کنم *
* بگفت این و بر زد بر ابرو شکنج *
* چو ماري که پیچد ز سوداي گنج *
* ز رومي سواري توانا و چست *
* بران آتش افگند خود را نخست *
* درآمد بدو زنگئي جنگ سود *
* بیک ضربت از تن سرش را ربود *

(*b*) و این مثل را فائده آنست که مرد عاقل باید که طرح دوستي باخداوند عقل افگند و از صحبت

دوست نادان بفرسنگها بگریزد - سنگ پشت
چون این حکایت که بر فوائد بیشمار اشتمال داشت
از بوزنه استماع نمود گفت اي دریاي دانش
گوش دل مرا بگوهر شاهوار حکمت زینت دادی
اکنون باز گوي که دوستان بر چند گونه اند - کاردان
گفت که حکما گفته اند از اهل روزگار جمعي که
دعوي دوستي مي کنند بر سه فریق انقسام
مي یابند - بعضے بمثابهٔ غذا اند که از وجود ایشان
چارهٔ نباشد و بي مشاهدهٔ پر تو جمال ایشان شمع
صحبت نور نه بخشد - و گروهے بر مثال دوا اند که
احیاناً بدیشان احتیاج افتد - و جمعي چون
درد اند که در هیچ زمان بکار نیایند و آنها اهل
نفاق و ریا باشند که با تو روئي و زباني دارند و
با مخالفان تو نیز طریق موافقت فرو نمي گذارند -
پس خردمند باید که ازین نوع دشمنان دوست رو
به پرهیزد و در پناه دوستان خالص و رفیقان مخلص
گریزد *

(c) عزیزي مرا حکایت کرد که وقتي در راه خوارزم
باشخصي همراه شدم و مدتي همسفره و همکاسه -
تا برسفرهٔ نان مي دیدید چون سگ مي دوید -
اتفاقاً با ما سگي همراه شد گاه گاه استخواني پیش
او مي انداختم - ناگاه دو دزد بما رسیدند یکي

چنگ در گریبان زد و دیگری دست در پای -
همراه در حال که روي درد دید پشت بداد - سگ
پاشنهٔ یکي گرفت و من دیگری را از پا در آوردم
و بمعاونت سگ از ایشان خلاصي یافتم - چون
دردان رفتند او گرسنه شد باز آمد گفتم — مثنوي —

* من نخواهم وصل چون تو نا کسے *
* سگ زچون تو نا کسي بهتر بسے *
* هست ازین پس صحبتم با تو حرام *
* ختم کردم با تو یاري وا لسلام *

درکِ اُرسي را بالا بکن - دو تا برمهٔ علفِ خشک (d)
بیار - چرا حرفِ نیم خائیده مي زني واضح
بگو - درین دود کش خیلي دوده است *

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

URDU TEXT-BOOKS AND GRAMMAR.

I (a) سرور سلطاني کے مصنف کا نام کیا - اور یهه کتاب کس کي فرمایش سے اور کونسي کتاب سے اور کب ترجمه کئي گئي *

(b) آتش کا حال مجملا تحریر کرو *

II. ان الفاظ کي انگریزي کیا هي *

ابر مطیر - کورنمک - یل خنجر گذار - جوهر کرنا - اپنا مُنهه دیکهو - اپنے قدح کي خیر منانا - نوک کي لینا

افراط و تفریط - مسہری - جھڑمت مارنا - چھکے چھوٹنا - خال خال - راھوار - مآل بین - ناک چنے جبوانا - چار چاند لگنا *

III. (a) ابیات ذیل کي شرح سلیس عبارت مین لکھدیجئے *

* جوھر اپنے آئینۂ رخسار کا دکھلائیگا *
* سبزہ خط یار کا تنکے مجھے چنوائیگا *

* ھي سزاور اھل دولت سے فقیرون کا غرور *
* ہاتھہ کو جو کھینچ لیگا پاؤن کو پھیلائیگا *
* کون چھینے بت کو توڑے برھمن کے دل کو کون *
* اینت کي خاطر کوئي کافر ھی مسجد ڈھائیگا *
* یہہ صدا آتي ہي شور بحر ھستي سے مجھے *
* گوھر مقصود اس دریا سے باھر پائیگا *
* طفل کے مانند اس پر رال ٹپکے گي مري *
باغ عالم مین مجھے شفتالو لب بھائیگا *

(b) کسی ایک مصرعۂ مزبور کي تقطیع کیجئے *

(c) دوسری بیت کي ترکیب کس طرح ھي *

IV. بتلاؤ کہ الفاظ ذیل مین مذکر اور مونث اور مشترک کون سے ھین *

سرکار - دریا - برسات - تعویذ - چنگ - نوشت خواند - چیل - فکر - ب - ر - کوّا - س - جان - ع بلبل - موتي *

V. ماتحت کے جملون میں لفظ نے جو علامت فاعل هي موافق قاعدۂ اردو کے داخل کر کے فعل کي تبدیل کیجئے *

(۱) عورت کھانا کھائي (۲) مرد کتاب پڑھا (۳) وہ ایک ورق کو دیکھا (۴) هم دس ورق کو دیکھے (۵) وے ایک ورق پڑھے (۶) وہ چار ورق پڑھا *

VI ان الفاظ کي لغوي اور اصطلاحي معانی لکھو *

مصرع -- بیت -- نحو -- تقطیع -- مطلع -- مقطع -- صرف -- لفظ *

VII. عبارت ماتحت کا خلاصه سلیس عبارت مین رقم کرو *

(۱) مدۃالعمر طهمورث مکلف ملّت اور آئین کا نهوا لکُمْ دینُکم ولیَ دِین پر مدار رکھا *

(۲) سنت صوم اسی کے زمانے سے هي قحط اس عرصے مین واقع هوا یهان تک که دن کو قرص خورشید تابان سے آنکھین سینکتے - رات کو کلیچۂ ماہ رخشان سے دل ٹھنڈا کرنے *

(۳) سام جناح تعجیل پر برسبیل سیل یلغار نوذر کی خدمت مین حاضر هوا *

VIII. مرقوم الذیل پادشاهون سے کسي پادشاہ کي ایجادات مجملا تحریر کرو *

هوشنگ - طهمورث - جمشید *

IX. بتلاؤ کہ ہر ایک بیت ماتحت مین کیا صنعت ہي *

(ا) * میری زبان سے مدح کہان اسکی ہوسکے *
* توصیف مین ہي جس کے زبان قلم قلم *

(ب) * پوچھا کہ طلب کیا قناعت *
* پوچھا کہ سبب کیا کہ قسمت *

(ج) * ایک ہفتے مین بنین نرگس بیمار آنکھین *
* کوئي دو تین دن اس سے جوکرے چارآنکھین *

(د) * اؤر کس کا آسرا ہو سرگروہ اس راہ کا *
* آسرا اللہ اؤر رسول اللہ کا *

X. ان مثالون مین ہر ایک قسم کے استفہام کا نام رقم کرو *

تمہارا نام کیا ہي - تُم دانا نہین ہو تو اؤر کون ہو - کیا دنیا مین ہمیشہ رہو گے *

XI. غرض اضافت اؤر صفت سے کیا ہي *

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P.M.

URDU: TRANSLATION AND COMPOSITION.

I. Translate into Urdu:—

I once knew a little girl who after a quarrel, in which she had said some unkind thing to her sister, went and sat down on the step of the door to enjoy the beautiful moonlight evening. She looked up a long while at the silent stars and at the quiet, gentle moon, and the longer and farther she looked into the depths of the heavens, the more she thought of the love and power of Him who made all things. At last she said to herself, "He who made this glorious world must wish all to be good, all to be happy, and I have been

destroying the peace and harmony of His world; but for *me* all would be good and beautiful!" She ran in to her sister and took her by the hand and said, "I am sorry for my unkindness to you; forgive me and come and enjoy with me the beautiful moon and stars that God has made for us all to enjoy." Thus will thought, patient thought, teach us that love is not only right, but more happy than hatred; truth more noble, more desirable than falsehood; and that no suffering which right-doing can bring upon us is equal to the torment of a bad conscience. Nothing truly great or valuable has been, or ever will be, accomplished without patient thought. By thought alone can we make ourselves wiser and better, for we are made thinking beings, and the more we occupy the mind with good thoughts, the truer, the nobler, and the happier we are.

II. Subject of a short Essay in Urdu:

The force of example for good or evil. (کسي کے رویہ کي تاثیر نیکي و بدی مین دوسرون پر)

III. Translate into English:—

(a) رستم و زال یہہ حال سن کے سیستان سے فوراً آئے - بہت پیش کش همراہ لائے - ملازمت حاصل کي خلعتہای گران بہا سے مخلع هوے سرفراز هوے همچشمون مین ممتاز هوے - چندے تو صحبت راگ و رنگ جلسۂ عیش و طرب رها - اس کے بعد انتقام خون سیاوش کا مشورہ رها - رئیسان نامدار پہلوان شیر دل خنجر گزار افسران سپاہ غرض کہ جتنے ترقي خواہ تھے یک دل و یک زبان آمادۂ کارزار هوے - جان لڑانے کو طیار هوے - کاؤس نے سوا لاکھہ سوار کارگزار فریبرز کے همراہ کرکے فوج کا هراول بنایا طوس اسی کي رفاقت مین رها اور

میمنہ گپو اور گودرز کو سونپا ۔ گستہم طوس کا
بھائي میسرہ کا مالک ہوا ۔ اور نیس ہزار پہلوان
زبردست جوان فوج کے سوا کیخسرو کے رکاب
میں مقرر ہوے *

(b) * نار تار پیرہن میں بھر گئي بوي دوست *
* مثل نصویر نہالي میں ہون یا پہلوي دوست *
* واہ رے شانہ کي قسمت کس کو یہ معلوم تھا *
* پنجۂ شل سے کھلینگے عقدہاي موي دوست *
* دو مربنگے زخم کاري سے تو حسرت سے ہزار *
* چار تلوارون میں شل ہو جائینگے بازوي دوست *
* فرش گل بستر تھا اپنا خاکبر سوتے ہیں اب *
* خشت زیر سر نہیں یا تکیہ تھا زانوي دوست *
* اس بلاي جاں سے آتش دیکھئے کیون کر بنے *
* دل سوا شیشے سے نازکدل سے نازکخوي دوست *

(c) * ٹھوکرین مار کے مردون کو جلانے نچلو *
* رشک سے خاک میں زندون کو ملاتے نچلو *
* گوشمالي دو نہ گلگشت میں گل کو پیارے *
* طفل غنچہ ہي غریب اس کو ڈراتے نچلو *
* منہہ چھپا کر یہ نکلنا ہي تمھارا اندھیر *
* رہ نشین عاشقون کو راہ بتانے نچلو *
* ان سے کہہ دو کوئي آنے ہین جو یہہ لکھ ابر *
* چشم آتش کي طرح آنسو بہاتے نچلو *

(d) بیٹے نے کہا کہ اي والد بزرگوار اگر کسب کرے
اور خُداوند تعالي خزانۂ کرم سے بہت سا مال و
منال عنایت فرمائے تو اسے کس طرح صرف
کرے اور اگر جمع کرے تو کیونکر رکھے - باپ نے
کہا کہ ای فرزند مال جمع کرنا آسان هي مگر
فوائد حاصل کرنا اس سے البتہ مشکل هي جبکہ
مال ہاتھہ آئے تو دو صورت کو اختیار کرے - ایک
یہہ کہ محافظت اُس کی اِس طرح پر کرے کہ
تلف و تاراج سے ایمن رہے اور دسترس دزد اور
اہ زرن اور کیسہ بر اس سے کوتاہ رہے کہ زر کے
دوست اور زردار کے دشمن بہت ہوتے هین -
دوسرے یہہ کہ اپنے مال کے فائدے سے گذران
کرے اور اصل مال کو هرگز تلف اور صرف نکرے -
وِالا اندک زمانے مین نکبت افلاس مین مبتلا
هو جائیگا *

* هر کسي کو چاهئے فکر معاش *
* پر توکل پر ہو روزي کي تلاش *
* چاهئے کسب و توکل ساتھہ ہو *
* سوي حق دل سوي حرفت ہاتھہ ہو *

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

TAMIL: TEXT-BOOKS AND GRAMMAR.

I. (*a*) விருத்தப் பாவிற்கு இலக்கணமென்ன ?

(*b*) ஒவ்வொரு விருத்தத்திலும் விசேஷமாய்க் கவனிக்கவேண்டும் மூன்று விஷயங்கள் யாவை ?

(*c*) சூதுபோர்ச்சருக்கம் என்பதன் பொருளை விரித்தெழுதுக.

II. கணைவரும் வரிவில் வாழ்க்கைக் கடுங்கன லணைய தோற்றத்

துணைவருந் தானுங் கங்கா சுதனுமற் றெவருஞ் சூழ
வினைவரு மரச ரில்லா விகலரி யேறு போல்வான்
கிணைவரு மோதை மூதூர்க் கிளர்நெடும் புரிசை புக்கான்.

(*a*) தானும் என்பது எந்த வினையோடு முடிகின்றது?

(*b*) மூதூர் என்பதற்கும் அதன் முரண்மொழிக்கும் புணர்ச்சிவிதி கூறுக.

(*c*) கணைவரும் வரிவில்
வாழ்க்கை.
ஏறுபோல்வான்.
புரிசைபுக்கான்.
} இவற்றிலுள்ள சந்திகள் இயல்பாய் நிற்றற்கு விதி என்ன ?

(*d*) வாழ்க்கை கடுங்கனல் எனக் ககரம் மிகாதிருப்பின் வரும் அர்த்தபேதமென்ன ?

III. வெங்கிராத வனமெரித்த விசயனுக்கு விஞ்சையனங்கிரா மகிழ்ந்தளித்த வாடன்மாவு மளகநீள்
பொங்கிரா மணஞ்சிறந்த போகமாதர் பலருமன்
றிங்கிரா நரேசனுற்ற விசைவினு லளிக்கவே,
கடியெனக் கேட்டுக் கடியான் வெடிபட
வார்ப்பது கேட்டு மதுதெளியான் பேர்த்துமோ
ரிற்கொண் டினிதிருஉ மேமுறுத லென்பவே
கற்கொண் டெறியுந் தவறு.

(a) இவைகளுக்குப் பதவுரை எழுதுக.

(b) நரேசன் என்ன சந்தி? அதன் பெயரென்ன?

(c) இங்கே கல்லென்றது என்னத்தைக் குறித்தது?

விழியினெஞ்சின்வா னெருப்பினீடுதியின விதி
படைப் பினிற்றோன்றிப்— பொழியும் வெண்
கதி ரைவகைமதி.

(d) இதிற் குறித்த பூர்வ சம்பவங்கள் யாவை?

IV. (a) பங்கயம், தினகரன், பாஞ்சாலம், விபுதர், இவற்றின் சப்தார்த்தம் எழுதுக.

(b) வேட்டம், மறை, இரட்டி, மாண்ட, சான்றோர், இவற்றின் பதவுறுப்புகளைப் பகுத்துப புணர்த்துக.

V. விதரணம், நவியம், சல்லியம், ஆனகம், ஒட்பம், தோதகம், தனிதம், மருமம், மம்மர், வல்லுதல், கோட்டி, குணுங்கர்.

(a) இவைகளுக்கு அர்த்தமென்ன?

(b) இவற்றுள் இரண்டு சொல்லுக்கு அவை வந்திருக்கும் செய்யுள் அடி முழுதையும் எழுதுக.

VI. கொத்தனை யுகளு நன்னீர்
எந்தகோவிவனுக்கிந்த முதன்மை
பாவி யானதங் கணுகுரு தொழியினும்
சுற்று நீளமு முயரமு நிகர்ப்பன
தேனெறிந்து தேனுகர்ந்து தேனெடுக்கு மாலை
மரபி லாதியா மதியும்
இன்னிருந்த தலைவர்
மாயானோ மாற்றிவிடின்
காழாய கொண்டு கசடற்றார்
சக்கரச் செல்வம் பெறினும்

இவ்வாக்கியங்களுக்கு அர்த்த மெழுதுக.

VII. (a) பூந்தண் மாமலர் என்பதில் நகரவொற்றும், தேம்போதனைத்தும் என்பதில் மகரவொற்றும் வருதற்கு நன்னூல் விதி எழுதுக.

(b) மனுவிளங்கு முறைமையான் என்பதில் மனு என்ன பெயர்?

(c) வேணுமாயின் வேணும்:—இதில் வேணுமென்பது என்னமொழி?

(d) ஆகுபெயர்க்கும் அன்மொழித்தொகைக்கும் பேதம் யாது?

VIII. என்றும் புதியார் பிறப்பினு மிவ்வுலகத்
தென்று மவனே பிறக்கலான் - குன்றின்
பரப்பெலாம் பொன்னொழுகும் பாயருவி நாட
விரப்பாரை யெள்ளா மகன்.

பழமைகந் தாகப் பசைந்த வழியே
கிழமைதான் யாதானுஞ் செய்க - கிழமை
பொருஅ ரவரொன்னிற் பொத்தித்தந் நெஞ்சத்
தருஅச் சுடுவதோர் தீ.

(a) இவை இரவச்சமானது எப்படி?

(b) முதல் வெண்பாவைக் கதை நடையாக எழுதுக.

(c) அளபெடை எத்தனை வகைப்படும்? அதில் பொருஅர் - அருஅர் என்பன என்னவகை?

IX. (a) அற்ப அறிவுடையவர்கள் கல்விமான்கள் சபையில் எப்படி ஒழுகுவார்கள்?

(b) அவர்கள் எதிர்ந்த சபையில் இவர்கள் எப்படி ஒழுகுவார்கள்? இவற்றிற்கு விடை நாலடியாரின்படி எழுதுக.

X. "என்று மென்று மிந்துவு மின்றி யொளிரு மயோத்திமாநகரம், பூபிராட்டி திலகம் போலவும், மங்கலம் போலவும், அல்லி பரல்போலுறுத்துமென வஞ்சி யம்புயத்தையும், மறுவோ டிருத்தன்

மறுவெனக் கருதி ஸ்ரீமந் நாராயணன் மார்பை யு நீதது இலக்குமி தங்குவதற் கினிய தானம் போலவும், கலைமகட்கு வெண்டாமரை போல வும் பொலியா நிறகும்."

(a) இதை நல்ல தமிழ்நடை சிதையாமல் வேறு சொற்களால் தெளிவாக எழுதுக.

(b) என்றுமென உகரங் கெட்டும் இந்துவுமெனக் கெடாதும் வருவதற்கு நியாயமென்ன ?

(c) திலகம் வேறிறுதி பெற்றும் வழங்குகின்றதா ?

(d) சுபத்தின் பெயராகிய மங்கலம் இவ்விடத்து யாது பொருள்பட நின்றது ?

(e) அம்புயம் என யகரம் வந்ததற்கு நன்னூல் விதியாது ?

XI. (a) இராமருக்கு முந்திய சூரியவமிசத்து அரசரில் யாவராகினும் மறறயுகத்தில் பாண்டவா காலததுச சநதிரவமிசத்தரசரைக் கண்டு சம்பாஷிததுண்டா ? அச்சம்பாஷணையெனன ?

(b) சிபிச்சக்கிரவர்தி விசேஷ மகிமைபெற்ற காரணத்தைச் சுருக்கமாக எழுதுக.

XII. அமபரீஷன், திரிசங்கு, திலீபன் :—இவர்களைக குறிதது அறிநததைச் சுருககமாக எழுதுக.

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P M.

TAMIL TRANSLATION AND COMPOSITION.

I. Translate into Tamil—[See Urdu Translation paper, p. ciii.]

II. Subject of a short Essay in Tamil—

The qualities which most conduce to success in life.

(நமது வாழ்நாளில் காரியசிததிபெறுவதறகு ஏற்ற குணவிசேஷங்கள்.)

III. Translate into English—

(a) கரவாத திண்ணன்பிற் கண்ணன்னார் கணணு மிரவாதுவாழ்வதரம் வாழ்க்கை.

(b) கற்றறிந்தார் கல்வி விளங்குங் கசட்றச்
சொற்றெறிதல் வல்லா ரகத்து.

(c) நன்றி பிரிகல்லா நாணின் மடமாக்கள்
பொன்றிலென் பொன்றாக்காலென்.

(d) ஓதியுணர்ந்தும் பிறர்க்குரைத்துந் தானடங்காப்
பேதையிற் பேதையாரில்.

(e) மைதீர் பசும்பொன்மேன் மாண்ட மணியழுத்திச்
செய்தெனினுஞ் செருப்புத்தன்—காற்கேயாம்.

(f) ஒருநன்றி செய்தவர்க் கொன்றி யெழுந்த
பிழைநூறு சான்றோர் பொருப்பர்—கயவர்க்
கெழுநூறுநன்றி செய்தொன்று தீதாயி
னெழுநூறுந் தீதாய்விடும்.

(g) சொல்லப் பயன்படுவர் சான்றோர் கரும்பு போற்
கொல்லப் பயன்படுங் கீழ்.

(h) புதைநக மடங்கனுளும் புறஞ்செலா தொடுங்கு மானுன்
மதகரி விடுமோ.

(i) அறந்தரு மைந்தன்றன்னை யறனலாதியற்றி நம்பி
திறந்தரு செல்வம்யாவுந் தீமையிற் கவர்த லற்றாய்
மறந்தரு வலியுமல்ல மணந்தரு வாழ்வுமல்ல
நிறந்தரு புகழுமல்ல நெறிதரு மதியுமல்ல.

(j) தீயினுற் சுட்டசெம்பு ணறுமத் தீயிற்றீய
வாயினுற் சுட்டமாற்ற மாறுமோ வடுவே யன்றோ.

(k) திலீபன் மகததேசத்தார் கோமான் றநயையா கிய சுதேட்சனை யென்பவனை வேட்டு வேற்

றரசரை யடிமைகொண்டு மழலைச்சொற் கேளாதவனுகிக்குழவும் யாழு மினிதென வாழுநாளில்.

(l) தினபந்துவானவர் மாருதியை நோக்குற்று அன்ப! நின்கருத்தென்னென்றனர். அஞ்சலி மஞ்சர் தொழுது தேவ தேவ! அவ்விபீஷணர் நின் சரணத்தை விலைகொண்ட சிந்தையுடைய வுத்தமர். தேவரீர் கருணைக்கவர் பாத்திர ரென்றே யெண்ணுகின்றனன். திருவுளத்தின் குறிப்பறியேனென்று தொழுதனர். பகுத்தறிவில்லாவோர் யானை கராவாற்கதுவப்பட்டு மெய்க்கைந்து ஆவியோட லற்றுய்யுமாறின்றிக் கையெடுத்து ஆதிமூலமே சரணம், பரமமே சரணமென்றுலமிடுகையில் விரைந்து தடங்கரை சார்ந்திடங்கரை வதைத் தக்கஜேந்திரனை ரட்சித்த சர்வேசர் சரணமடைந்தவரைக் கைவிடுவரோ.

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.
TELUGU: TEXT-BOOKS AND GRAMMAR.

I. సప్తద్వీప విశాలభూభరము దోస్తంభంబునం బూని సం
ప్రాప్తశ్రీయుతుఁడై మహావిభవ సంపచ్చాతురింగల్గి దు
ర్వ్యాప్తింజెందక వైష్ణవార్చనల మేరం గాలముంబుచ్చు
చుఁ
సుప్తింబొందక సెప్పె సద్గుణ గరిష్ఠుండంబరీషుండిలఁ.
ఆ రాజేంద్రుఁడు గాంచె భూరివిధరత్నాగారము న్నీనకుం
భీరగ్రాహ కఠోరమున్విపుల గంభీరంబున భ్రభ్రమ
ద్ఘోరాస్యోన్నవి భిన్నభంగ భవనిర్ఘోష ప్రకటాంభఃకణ
ప్రారుబ్ధాంబర పారమున్లవణ పారావారముం జేరువఁ.

శతధారా జాయమానజ్జ్వలితముఖశిఖాచ్ఛాదితాభ్రస్థలంబై
వితతాభీలధ్వని శ్రీవిలసన బధిరోద్విగ్నదిగ్వారణంబై
కృతలోకాలోక ముఖ్యాఖిల గిరిచలనాక్షిప్తభూమండ
లంబై
వతయాశుద్వాదశాత్మప్రకర ఖరకరాపమ్యమై యేగుదే
రన్.

(a) పైపద్యములకు దండాన్వయములు వ్రాయునది.

(b) సప్తద్వీపములఁ బేర్కొని యవి యొకటికొకటి యె
య్యే దెసలనుండునదియుఁ దెల్పునది.

(c) ఎ, ఏ, ఈ యవ్యయము లెయ్యే యర్థములవచ్చున
దియు సోదాహరణముగ వ్రాయునది.

(d) పూని, కలిగి, పుచ్చుచున్. ఇవి యెట్టిక్రియలు?
క్త్వార్థక, తుమున్నాద్యర్థక, శత్రర్థక, చేదాద్యర్థక,
ఆనంతర్యార్థకములయొక్క లక్షణముల సోదా
హరణములుగఁ దెల్పునది.

(e) రెండవపద్య మేవృత్తిని వ్రాయఁబడినది? తద్వృత్తి
కాశ్రయములగు రసములెవ్వి?

II. తగవే ధర్మమె శీలమేకులజవై దర్పించి మోదింపనా జగ
దారాధ్యునిఁ బుణ్యశీలుఁ దవకిన్ సాధ్వీమనస్సమ్మతు
న్మగనిన్మాని &c. &c. &c.

(a) ఈపద్యములోని సంబోధనము సందర్భోచితమా?
కారణమిండు.

(b) ఇవి యెవరిమాటలు? తపస్వియెవఁడు? ఆతఁడు మన్న స్సమ్మతుఁడెట్లు?

(c) తగవు, ధర్మము, శీలము, వీనికిఁగల పరస్పర భేదములఁ దెల్పునది.

III. (1) ప్రభంజన తనయుగదపెట్టుమాడ్కిని సమీపగత దుశ్శాసన దుర్మదనివారకంబై,
వర్ణగుణితంబు తెరకువను బహుదీర్ఘబిందువిసర్గంబై, సర్గబంధకావ్యంబు విన్నను పునగంభీర భావమథురంబై,
రామచంద్రునిబాణంబు కడిందినభ్యాగత ఖరదూషణ మదాహారము ఖరంబై.

(2) చోద్యమప్పుడు భవరోగవైద్యుఁడైన యంబుజోదరుఁడాసిన యంతమాత్ర
నవగతాసాధ్యగదుఁడయ్యె యక్షభర్తసారిదిరుద్రులు నిర్ముక్తశూలురైరి.

(3) అహితనివహగహన భస్మీకరణకరణ విస్మయావహప్రతాప శిఖోహ్యమానశిఖినామకుండు
శశ్వదైశ్వర్య వత్త్వప్రకటన పటు నీలకంఠాభిఖ్యుండు.
పై వాక్యములకు విపులముగ నర్థతాత్పర్యములఁ దెల్పుచు వానియందలి విశేషములఁ జూపునది.

IV. (a) ఆకుంఠితుఁడైనురరాజు కృష్ణునిరేడుశరంబులన్, &c.
ఈరేడు శరంబు లేసె ననుచోఁ గవిహృదయమేమి?

(b) ఫలకగర్భంబులకుఁదార్చి నిజనివాసంబులకుఁ జేర్చికొనుచు.

ఈ వాడుక ఐరోపాఖండములో మున్నే దేశంబున నుండెను ?

(c) భూపాలక ప్రవరుల్నవ్విరి నర్మగర్భవచన ప్రాగల్భ్యమే పారగఁ.

సమయోచిత నర్మగర్భవచనములఁ దెల్పందగు.

(d) వరిచ్ఛిన్నకర్ణనా సాధరులగు విద్యాధరులు పన్నగేంద్రులు పటాపంచలయిరి.

ఇందులో మొదటిదానియందలి విశేషణముకుం బ్రయోజనంబును రెండవదానియందలి శ్లేషయుఁ దెల్పునది.

V. (a) "కరమర్థి న్దివరార్థసంజ్ఞగల యాకాలంబు కాలాత్ముఁడై సారిదిన్నిండఁగఁజేసి లోకములు నాచోటున్విభుండెవ్వఁడో."

దీని కన్వయముర్వాయునది. ఇందుం గడవటి ఓకారమునకును :—

(1) కోమలులార వీఁడునల కూబరుఁడో మరుఁడో జయంతుఁడో

(2) ఉపవానంబుల డయ్యుటో విషయ సంయోగంబు వర్జించుటో.

వీనియందలి ఓకారములకుఁగల పరస్పర భేదంబుఁ దెల్పునది.

(b) (1) మునియఁట తత్త్వవేధియఁట మోక్షముగాని సుఖంబులివ్వియఁ జనదఁట, ౫౦.

(2) సతులఁట ప్రాణనాథులఁట సారెకు నైక్యములైన మోహసంగతులఁట

ఈ రెంటియందును 'అట' అనుదానికిఁగల భావభేదముఁ దెల్పునది.

VI. (a) దైయచ్చరనేన:—ఇటనాదివృద్ధి యేయర్థకము? మఱి యేయర్థకముల నాదివృద్ధిగలదు? ఉదహరించునది.

(b) సంభ్రమన్నాకపురీ మహారథులు:—దీనిన్విసంధిగ వ్రాసి మొదటిపద మెద్దానికి విశేషణమైనదియుఁ గారణ సహితముగఁ దెల్పునది.

(c) 'జడంబు తృతీయాసప్తములకు ద్వితీయ బహుళంబుగానగు'

జడంబుగానిచో సయిత మిక్కార్యంబు గానంబడియెడిని.

మీ పాఠపుస్తకములలో నొకటిరెండు ప్రయోగములఁ జూపఁబోలు.

(d) కొమరాలు, ధీరురాలు.

ఈ రెండుపదములలోని వ్యాకరణ కార్యములకుఁగల భేదమును దెల్పి యట్టిభేదమునకుఁ గారణముఁ దెల్పునది.

VII. (*a*) హరిపాదాబ్జము లెంతముట్టఁ గొలుతే యాశ్చర్య మౌనైనచో
ననుఁదండ్రీ నినుఁబోఁటిసాధులకుఁ దానైయిచ్చుటల్ గాచుటల్
ఇందేభందోభంగమున్నను సవరణచేసి వ్రాయునది.

(*b*) ఇతని కితండెసాటియగు నీతనికీతఁడెసాటి &c.
ఇందేరెండలంకారముల కన్వయముగలదు ?
సందర్భానుసారముగ నేదియొప్పికొనఁదగియున్నది ?
కారణమిచ్చునది.

VIII. (*a*) నవమస్కంధమునఁ జెప్పఁబడియుండు వైవస్వతమనువు వంశావళిఁబట్టి యాదిని బ్రహ్మక్షత్రియకులంబు లొండొంటితోఁ గలసియుండెనంటకుఁ గొన్ని దృష్టాంతములఁ దెల్పునది.

(*b*) విదేహ, ఆనర్త, ఈ దేశముల కీపేళ్లెట్లుగల్గె ? ఆవి యెటనున్నయవి ?

IX. (*a*) పారిజాతాపహరణమునకును భాగవతమునకును గలిగియుండు కావ్యరచనాభేదముల సోదాహరణములుగఁ దెల్పునది.

(*b*) చతుర్విధ కవిత్వములలో నాశుకవిత్వ ప్రాశస్త్యముఁ దెల్పి తదితరములకుఁ బారిజాతాపహరణమునుండి యుదాహరణములనెత్తి వ్రాయునది.

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P.M.

TELUGU: TRANSLATION AND COMPOSITION.

I. Translate into Telugu—[See Urdu Translation paper, p. ciii.]

II. Subject of a short Essay in Telugu—

The qualities which most conduce to success in life.

మనుజుని ముందుకు ముఖ్యముగా తేగల గుణములు.

III. Translate into English—

(1) హా! ఏమి సేయుదును. ఈ దేహ మిన్నినాళ్లను బెంచి కడకీక్రించుగూబ పొట్టఁబెట్టవలసివచ్చెను. దైవ మా నీకంటికిం బేలగింజయుఁ బెద్దదయ్యెనె, ప్రాణంబులు గొనందలంచి నాపాలివిధి నన్నిటకుం దెచ్చెఁగాఁబోలు. తప్పింపనెవ్వనికి శక్యమగును, అడవిలోపల ఫలమూలమాత్రంబున దేహయాత్రనడుపుచు నెరులకెన్నఁడు నెరగుతలఁచి యెఱుఁగని నాకును ముదిసిన ముప్పుకాలంబున నపాత్రపుఁజూపుచావ విధి లిఖియించెనె. ఆ మాలదైవముచేఁతలకు మేరగలదే? నిమిషంబు క్రింద నీపిల్లిపీడనేఁటితో విఱుగడయాఁగదాయని హాయిగానుండఁజింతింప నింతలో నా కీయకాలమృత్యు వెక్కడనుండి యాసన్నమాయెను. దీని కేమి సేయుదు. ఎందుఁజొత్తు. అని విలపించి గుండియలవిసి బెండువడి మగుడ ధయిర్యంబవలంబించి యిట్లు చింతించెను.

(2) ఎక్కడ వెఱపుగలుగునో యక్కడ సత్యముండదు. ఏకడ సత్యముండదో యాకడ ధర్మముగలుగదు. ధర్మపుఁ గఱపనివారు వృద్ధులుగారు. వృద్ధులు లేనిది సభకాదని పెద్దలుచెప్పుదురు. మఱియు దూత తుచ్ఛుండైనన్ మ్లేచ్ఛుండైనను జంపఁబడఁ దగదు. ఎందువలననఁగా నరేంద్రుండు చారలోచనుండు. ఇట్లుండ నీశుకద్విజ ఫణితికిఁగినిని యీ మాటల పులుఁగునకుఁ జేటుపాటులఁ జేయఁజనునా. తగదు తగదు. ఇది తనకు ఔనియానతినిని దేవర యనుమతినిని దన వేగిరతనము మెఱయవిని చెనుగాని వేఱుగాదని యాతని కాతాళముసో యనమాని చెను.

(3) వశుఁడుగ మ్రొక్కెదన్లవణ వాధిన్ విజృంభణ తాని ఖర్తికిన్ ।

దశదిగధీశమౌళిమణి దర్పణమండిత దివ్యకీర్తికిన్ ।
దశశతభానుమూర్తికి సుధారుచిభాషికిసాధుపోషికిన్ ।
దశరథరాజుపట్టికిని దైత్యపతిం బారిగొన్నజెట్టికిన్ ॥

(4) నవచంద్రాలిక నీకునేలయను మానంబాగ మోక్షంబుగా ।

న విచారింపకధారవోయమనిన న్లజ్జాభరక్రాంతలై ।
నవతుల్వాంచిరి వక్త్రపంకరుహ ముల్సంబంధ భూపాలక ।

ప్రవరుల్నువ్విరి నర్మగర్భితవచః ప్రాగల్భ్య మేపా
రఁగన్ ॥

(5) తలిరులతుదఁజినుకులు జలజలవడియఁగఁ ।
దడిసి మెలగుచలి కరువలినుస్పులవమున
విరియుపరువపుఁబోలు మొగడల వలపు ।
దెలుపుతోఁటలలోనన్ ॥

WEDNESDAY, 17TH DECEMBER, 10 A.M. TO 1 P.M.

KANARESE: TEXT-BOOKS AND GRAMMAR.

I. (a) జైమిని శారకవెంబ పేరు నీవు ఓదిద కావ్యక్కే హ్యాగే బంతు?

ఈ కథెయన్ను ప్రథమక యావ పురాణదింద ఎత్తికొగద్దు?

కన్నడిసిద్ద యాతు, యావాగ్యే యావ ఊరల్లి?

ఈ ఊరు హిందుస్థానద యావ భాగదల్లి ఉంటు?

(b) ఈ శూత్రోకద విస్తీర్ణతెయ విషయవాగియూ హిందుస్థానవు ఎదరొళగే హ్యాగే నివిష్టవాగిరుత్తెంబ విషయవాగియూ కుళీ పురాణికర కెళువళికే హ్యాగిత్తెంబదన్ను నీవు ఓదిద పుస్తకదింద తిళిదు బరువ మట్టిగే హేళిరి.

II. 'చిత్రలేఖా' మత్తు 'ఇందిరే' ఇవరిబ్బర గుణగళల్లి రువ వ్యత్యాసవన్ను నిదర్శన సహితవాగి జాగరూకతెయింద నిరూపిసువుదు.

III. సింహశాబను చిత్రలేఖియన్ను కొల్లువ ఉద్దిశ్య తన్ను రంజుకెగె కాగద బరదందినింద పునః చిత్రలేఖియు లోకనిగె దొరకువవరెగె లోకన మనస్సినలి నడద వ్యాపారవన్ను (workings of his mind) వర్ణనే మాడువదు.

IV. కెళగిన పద్యగళ శ్లేషార్థవన్ను వివరిసిరి :—

(1) వసుగళిందుప కోశ్యమాగదొడె సౌరభ్య
రసదింద లారోగ్యమినిస దొడెసంకలం
విశద సుమసోదరోగ్యమల్లదొడె సురవైభవ
శ్లాఘ్యమల్లదిరలు।
అసదప్సరోద్యాన సాహాగ్యమొందిరదొ
డిసేవరాజీందర్గింగెసొగసువీడాగిరం
జివదొడీ హస్తినావళియ నమరావళిగె సరిమెంబరీ
సార్థరు ॥

(2) సురియంతె బలయుతం శివనంతె రాజశే
ఖరనబ్జ జీవనంతె చతురాననం సరి
ద్వరనంతె రత్నాకరం దివాకరనంతె నిర్దోషి
నింద్రనంతె।
పరిచిత సురశిరమ్య నమృతార్చియంతెవి
స్తరిత కువలయనెందు ధర్మజనధరిపొగళు
కిరిబళిక హస్తినావళిగె వేదవ్యాస మునియొందినం
బందను ॥

V (a) ಇಹುದೋರ ವ್ಯಾಪಾರಗಳನ್ನೂ, ಲಾಸ್ಥಾನಗಳನ್ನೂ, ರಾಜರನ್ನೂ, ಯುದ್ಧಗಳಲ್ಲಿ ನಡೆಯುವ ಕಂಕ್ರಿಗಳನ್ನು ಕುರಿತು ನಾನು ಹೇಳಿದ ಮಾತನ್ನು ಮರೆಯಬೇಡಿರಿ ಇವುಗಳೊಂದೊಂದರ ವಿಷಯವಾಗಿ ಲಾರ್ಯಮಿಕ್ರಿನು ಹೇಳಿದ ಮಾತುಗಳ ತಾತ್ಪರ್ಯವನ್ನು ಪ್ರತ್ಯಪ್ರತ್ಯೇಕವಾಗಿ ಬರೆಯಿರಿ.

(b) ಜಯಸಿಂಹ ರಾಜಚರಿತ್ರೆಯಲ್ಲಿ ಉಪಯೋಗಿಸಿದ ಕೆಲವು ಹೆಸರುಗಳು ಅನ್ವರ್ಥವಾಗಿವೆ ಎಂತ ಪೀಠಿಕೆಯಲ್ಲಿ ಹೇಳಿರುತ್ತದೆ. ಅಂಥ ಹೆಸರುಗಳ ಒಂದು ಪಟ್ಟಿಮಾಡಿ ಅವು ಅನ್ವರ್ಥ ಹ್ಯಾಗೆಂಬದನ್ನು ಹೇಳುವದು.

VI. (a) ಈ ಕೆಳಿನ ವಾಕ್ಯಗಳಲ್ಲಿ ಅಡಗಿರುವ ಪುರಾಣ ಕಥೆಗಳನ್ನು ಹೇಳಿರಿ :—

(1) ಶಿಶುಕನದಿಂದ ಸಲಹಿದ ಪಿತಾಮಹುಂಗೆ ನೆನದಿವನು ಚೇಕವನಗ್ರಜನೆಂದರಿಯದೆ ಕರ್ಣನನಿರಿದಿವಾಚಾರ್ಯ ವಧಿಗೆಳಸಿದೆವು.

(2) ಮರಿಯುಳ್ಳೊಡಿವನಸುರ ಬಲಿಗೊದಗಿದ ಕೂಳನಕಿ ಮಹೋದರ ದೊಳಗಡಸಿ ಕೊಂಬನೇ ನೀಕಿಗಳ ಗಕಿಯ ನರಿದೊಡೆ ನಿಶಾಚರಿಯ ನಿವನಾಳ್ವನೇ ರಾಗಿಮೆಂದರ ಮನೆಮೊಳು.

(3) ಇದು ಭೀರಥ ರಥವ ಬೆಂಕೊಂಡು ಪರಿವನುರ ನದಿಯ ಪ್ರಿನಾಹಮಿನಲು.

(4) ಈ ಹಿದರಜೀಕೆರರಡಿಯ ಮಗಳನಾಳ್ದನಿನಗೋ ಹೋಧರೆ ದೊಳದ್ಭುತಕಾರರಾರೊ.

(5) ಅಜಾಯುದ್ಧದ ಹಾಗೆ ಬೂಡಂಬರವಂಮಾಡಿ ಉದ್ಧರ ನಂಕೆ ಸ್ವಪ್ರತಾಪಮಂ ಕೊಚ್ಚುತ್ತಿರುವನು.

(b) 'ನೀವು ಮಾಡಿದುಪಕಾರರ ಬಲಾವ್ಯಂದ ಸಹಿತ ಬಂದೆನ್ನ ಸರ್ವಸ್ವಮಂ ಹರಿಗರ್ಪಿಸುವೆನು' ಈ ಉಪಕಾರ ಎಂಥಾದ್ದ ?

VII. (a) ಕೆಳಗಿನ ಮಾತುಗಳು ನೀವು ಓದಿದ ಪುಸ್ತಕಗಳಲ್ಲಿ ಯಾವ ಸಂದರ್ಭಗಳಲ್ಲಿ ಬಂದವೆಂಬದನ್ನು ಹೀಳಿ ಅವುಗಳ ಪ್ರಯೋಗವನ್ನು ವಿವರಿಸಿರಿ.

(1) ಕೊಳಲು ತರಸುವ ಬಳ್ಳಿತಾನೆ ಕಾಲ್ದೊಡಕಿದಂತೆ.

(2) ಅರಳಾದ ಮಲ್ಲಿಗೆಯ ಪೊದರೊಳಗೆ ಕಿರಿಗಿದೊಡಿ ಕೆರಳ ಬಲ್ಲುದಿ ಸಂಪಿಗೆಯ ಬನಕೆ ಮರಿದುಂಬಿ.

(3) ಜೀವಮಂಕೆಗದುಕೊಂಡೊಯ್ವ ಕಾಲನಂಶಿಣನಟ್ಟ ವಂ ತಾಯ್ತಲಾ.

(4) ತುಂಬಿ ಮರಿಸಂಪಗೆಯಅರಪರಿಮಳದೆ ಸೂರೆಗಂ ಬಯಸಿ ಬಂದುದು

(5) ಮದನಾರಣಂ ಪಿರಿದಾದೊಡೆಳೆ ಸಿಂಗಮಂಜಿಕೆಲ ಸಾರು ವದೆ.

(6) ಕಾಗೆಗಳ ಗುಂಪಿನಲ್ಲಿ ಶಿಲುಕಿದ ಕೋಗಿಲೆಯಂತೆ.

(b) ಮೇಲಿನಗಾದೆಗಳ ಅರ್ಥವನ್ನೀಕೊಡುವ ಬೇರೆ ಸಮಾ ನಗಾದೆಗಳು ನೆನಪಿದ್ದಲ್ಲಿ ಬರೆಯಿರಿ.

VIII. (a) 'ಅಂಚೆವಿಂಡಾಡದ ಕೊಳಂಕೊಳಂಗಳೊಳುಸಲೆ ಪಳಂಚೆ ಸುಳಿಯದ ಗಾಳಿಗಾಳಿಗಳ ಬಳಿವಿಡಿದು.'

ಈಪ್ರಕಾರ ಒಂದುಸಾರಿಬಿಟ್ಟ ಪದವನ್ನೇ ತಿರಿಗಿ ಕೆ ಕೊಳ್ಳುವದಕ್ಕೆ ಯಾವ ಶಬ್ದಾಲಂಕಾರ ಪೆಸ್ರು ತ್ತಾರೆ ?

(b) ಈ ವನದನಡನಡು ವಿ ಕೊಳಕೊಳಗುತಿರುಕಿಡಸ
ಕೋವರವರಂದೊಳಿದಳಿದಳಿದುಬೆಳಬೆಳದರಾ
ಜೀವದಲರಲರೆ ಕುಳಿಕುಳಿದು ವಿದಿದಿಡಿದ ಬಂಡಸೊಡಸೊ
ಡನೆ ಸವಿದುಸವಿದು ।
ಲೂವಗಮಗಲಡಿಯುಗಯುಗಮಾಗಿನೆರನೆರದು
ಕಾವಸೊಗಸೊಗನಿ ನಲಿನಲಿದು ಮೊರೆಮೊರೆವಭ್ರಂ
ಗಾವಳಿಯಗಾವಳಿಯ ಕಳಕಳಂನೋಡು ನೋಡು ರವಿ
ಕನಯಕನಯಾ ॥

ಈ ಪದ್ಯದಲ್ಲಿರುವ ನಿಜವಾದ ದ್ವಿರ್ವಚನಗಳನ್ನುಮಾತ್ರ ಒಂದೂಂದಾಗಿ ಕೆಕ್ಕೊಂಡು ಅವುಗಳ ಶಬ್ದಗಳು ಎರಡೆರಡಾಗಿ ಹೇಳಿದ್ರಿಂದ ಅರ್ಥಾಂತರವೇನಾಗುತ್ತದೆಂಬದೆನ್ನು ಬರೆಯುವದು.

(c) ಉಳಿಯ ಪ್ರೇಮೋಪರಿ, ಪರಾಕು, ಬುದ್ಧೀ (ಸೇವಕನು ಯಜಮಾನನೊಡನೆ ಮಾತನಾಡುವಾಗ್ಯೆ ಹೇಳುವದು), ಇವುಗಳಲ್ಲಿ ಅಡಗಿರುವ ಸಂಪೂರ್ಣವಾಕ್ಯಗಳನ್ನು ಹೇಳಿರಿ.

IX. (a) ' ರಾಯಸೌರಿಯ - ಸ್ವಾಮೀ, ನಮ್ಮ ಜ್ಯೋತಿಷ್ಕೇಶವರಾಯರು ಈದೇಶಕ್ಕೆ ಬಂದು ಅತುಳ ಪರಾಕ್ರಮವುಳ್ಳ ತಮ್ಮ ಪಿತಾಮಹರಾದ ಕಾಶೀರಾಜರಂಗೆದ್ದು ಅವರಿಂದಲೂ ಅವರ ಉತ್ತರಾಧಿಕಾರಿಗಳಿಂದಲೂ

ಪ್ರತಿಸಂವತ್ಸರದಲ್ಲೂ 3000 ಮೊಹರವಂ ಪೊಗದಿಯಾಗಿ ನಿಗದೀಮಾಡಿ ಕೋದ ವಿಷಯವಂ ಇಲ್ಲಿಯ ಜನರ್ಯಾರೂ ಮರತಿರಲಾರರು? ಇದು ಯಥಾರ್ಥವಾದ ಇತಿಹಾಸಾನುಸಾರ ಕಥೆಯೆಂದು ಕೋಚುತ್ತದೆ - ಹಾಗಾದರೆ ಅದು ಯಾವಸಂಗತಿ; ಮತ್ತು ಜ್ಯೋತಿಷ್ಕೇಶವರಾಯ, ಕಾಶೀರಾಜ, ನೀಲಪುರಿ, ಅಮರಾವತಿ ಎಂಬ ಹೆಸರುಗಳಿಗೆ ನಿಜವಾದ ಹೆಸರುಗಳ್ಯಾವವು?

(b) ಸಿಂಹಶಾಬನು ತಾನು ಕನ್ನ ಕಂಚುಕಿಗೆ ಬರದ ಕಾಗದದಲ್ಲಿ 'ನಾನು ಅವಳಿಗೆ (ಚಿತ್ರಲೇಖೆಗೆ) ಬರದ ಕಾಗದದಿಂದ ನಿನಗೆ ಈ ಕೆಲಸಕ್ಕೆ (ಅವಳನ್ನು ಕೊಲ್ಲುವದಕ್ಕೆ) ಸಮಯದೊರಕುವದು' ಎಂತ ಕೋಚುತ್ತಾನೆ ಚಿತ್ರಲೇಖೆಗೆ ಬರದ ಕಾಗದ ನೇನೆಂತ? ಆ ಕಾಗದದಿಂದ ಸಮಯ ದೊರಕುವದಂದರೆ ಹ್ಯಾಗೆ?

X ಕೆಳಗೆ ಕಾಣಿಸಿದ ವಚನಗಳ ಅರ್ಥವಿವರಣೆ ಕೋರಿರಿ.

(1) ಈಕನ ಹಾಗೆ ಅಟ್ಟಕ್ಕೂ ಬಿಟ್ಟಕ್ಕೂ ಗಂಟು ಹಾಕುವವರು ನಮ್ಮದೇಶದಲ್ಲಿ ಅನೇಕರಿರುವರು.

(2) ಅವನ ಗಾನವು ಗಂಧರ್ವಗಾನವು; ಅವನ ವ್ಯಸನವು ತಾನು ಅವನ ಸಂತೋಷದ ಹಾಗೆ ಮಂದಹಾಸಯುಕ್ತನಾಗಿಲ್ಲವೆಂದು ಚಿಂತೆಯಿಂದ ನಿಟ್ಟುಸುರಾಯಿತೊ ಎಂಬಹಾಗೂ; ಅವನ ಸಂತೋಷವು ಇಂಥ ದಿವ್ಯಚಂದ್ರಮುಖವಂ ಬಿಟ್ಟು ನಾವಿರರಿಗೆ ಬಾಧಕವಾಗುವ ನಾಯುವಂ ಸೇರಿಕೊಳ್ಳುವ

XII (a) కన్నడసంధి, సంస్కృతస్వరసంధి ఇవు ఒందొం దు ఎష్టేష్టు విధ ?

యావ్యావదెంబదన్ను ఉదాహరణే సహితవాగి బరయిరి.

కేళగన శబ్దగళన్ను సంధిమాడి ఒందొందు సంధియ హిసరన్ను హేళువదు.

బా + ఓ, నుణ్ + సర, పదూ + ఉద్వాడు, సుధీ + ఉపాస్య, కృష్ణ + రియద్ధి, లిక్ష + ఉహిని, సేనా + ఓభు, గో + లిక్ష.

(b) ఒందు క్రియెగే ఎరడు కర్మగళు బరువదుంటే ? ఇద్దరే ఒందు ఉదాహరణెయన్ను కొట్టు యావత్తరద క్రియెగళిగే ఈప్రకార బరుత్తవె, ఒందొందు కర్మక్కే హిసరేను ఎంబదన్ను హేళిరి.

(c) జహల్లక్షణే, అజహల్లక్షణే, జహదజహల్లక్షణే, గౌణి ఎంబవుగళన్ను నిర్దేశిసి ఉదాహరణే కొడువదు.

(d) అయోగవాహు, త్రిక, ప్లుత అందరేను ?

అయోగవాహుగళేను ?

ఒందొందక్కే హిసరేను ?

(e) 'ఇను' ప్రత్యయద ప్రయోగవన్ను సంపూర్ణవాగి హేళిరి.

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P.M.

KANARESE TRANSLATION AND COMPOSITION.

I Translate into Kanarese—[See Urdu Translation paper, p cm]

II Subject of a short Essay in Kanarese—
The qualities which most conduce to success in life.

III. Translate into English—

(కార్యసిద్ధిగే హిత్తాగి లను కూలవాగువ గుణగళు.)

(1) క్షాత్ర్య ధర్మవనీక్షి సల్లినగేపాతకం ।
గోత్రవధియిందె బప్పుదెమడాదేవనీం ।
ధాత్రియంపాలిసదిరల్కె నిర్దోషియేనావరియె
వీరగనిన్న ॥
గాత్రమం వనవాసక్కైదిసువమరమావ ।
సూత్రదొళ్కొణిసిదొ లేసు లేసారణ్య ।
యాత్రియం మాడునీం నూరుతిగే పట్టుంగట్టు వి
పునావిందను.

(2) ఇవర బ్యుతాంఘ్రిదర్శనలంపటర్వదిం ।
దవని పతిరుల శిరోమణియెనిపధర్మసం ।
భవనడియ నోల్పెసలెందు నింనంకాణ లోల
సుగంబందరేందు ॥
భవన జంగా వృషధ్వజ నొరదొడాతను ।
త్సవదొళా భూపాలనం కెగదు తక్కెనుం ।
తవన తనుజాతనంబిగియప్పలా నృపంబరప్పెగి
గింకేందను ॥

(3) ఎలే వృకోదర బాహు బలముళ్ళ వీరరుం ।

పలబరుంటిళిదొళవరంకండు బల్లేనాం ।
కలకుదొళ్నలకవంమ్మైమరదొడిరివరల్లది పగేయపొ
రేగేబందు ॥

అలసిదనివంధురె దొళేందవన నుపచరిసి ।
సలహిద పరాక్రమిగళార్నమీకలదొళీ ।
కలివృషధ్వజనల్లదమరదానవ మానవరొళొగేదపటు
ళొటరొళు.

(4) ఇదంనోడి జీకక్రలేఖియు—నాను అవనిగే యరడం మోజిసిదవళీ! హాగందరేను ? రాత్రియల్లిల్లా పతియ ధ్యానవం మాడుత్తలే ఇద్దుక్షణోక్షణోక్షణ ప్రలాపిసుత్తా స్వల్ప నిద్రిబందరే స్వప్నదల్లి అవనం కండుగాబరియల్లి ఎళువదేఖోఅవనిగే యరడు బగేయువపు ? నాను అంతవళీ ? అయ్యో ! దోషదర్శియే, నీను సింహశాబనం దుర్మార్గనేందు కరేదాగ నిన్నం నీజనహాగే కండిను. లూదరే నిన్నమాతు ఈగ నిదర్శనక్కే బంతు. తాయియ మూలక కృతక సౌందర్యవం పొంది తన్న హావభావ విలాసగళింద జపలజిత్తరన్నా కర్షిసువ యావదుష్టళో నన్న పతియ మనస్సం కెడిసిరబేకు ; ఓ సింహశాబనే ? నిన్నిందనన్న యౌవనవు పర్యుషితవాయితు, నన్నం త్యజిసి పరిగ్రహిసి అన్యరంస్వీకరిసు పనాది. అయ్యో ! పురుషరు ఇల్లి

యరిగే హీఱువ మాతెల్లా బేళ్వేమాతు గళీ, ఎల్మైగండనే! నిన్న డాగే జీలువాద కుసన్ముఖ వుళ్ళ ఎల్లరరూపవు స్త్రీయరం వంచిసువద కోక్కీస్కరలే ధరిసికోండు ముఖవాదవే హొరతు నిజ్జ యవల్లవేందు ఈనిన్న కూర్రిరృ త్యదింద శావిస బేకాయితు. పుష్కళనే! నిన్నొడియన లిప్పగోప్రకార నడియవనాగు; నీను లూతనం కండాగ బహువిధీయభాగి శీఘ్రేయం పొందిదళేందు హేళువనాగు; కత్తి యం హిరిదు నానే నిన్న కయ్యల్లిడువెను. ఈయపడదే నిరపరాధియాద నన్న హృదయవం భేదిసువనాగు. ఈ హృదయవు దుఃఖశోకవాగి దిమే హొరతు పూర్వదల్లి వాసవాగిద్ద నిన్నొడియనం బళగొండిల్ల; కార్యాంతరదల్లి ఈ నిన్న పరాక్రమవు శ్లాఘ్యు తరనాగిరబహుదు; సద్యక్కే నీను హేడిమే సరి ఎందళు.

(5) కుద్ధా అహతియ నురితుళ్ళిందమనిం నిగం।
ముద్దుగ్నేదీవసుధి బేళయిసిదళేందు తురు।
గిద్దతనివణ్ణళింది సేవశీగోనేగళం సలేసమర్పిస
తొడర్చి॥
ఎద్దిరదే బాగిదవొరేదళిగళ్ళరణిగేన।
అదపరే మరదు పురుషార్థమం నూడిదర।

ನುದ್ದಾಮಗುಣಮುಳ್ಳ ಜೀವಿಗಳ್ತನುಜ ಸೋಡೆಂದನಾ
ಪವನಸೂನು ॥

WEDNESDAY, 17TH DECEMBER, 10 A M TO 1 P M

MALAYALAM TEXT BOOKS AND GRAMMAR

I (a) അയ്യത്തൊന്നക്ഷരാളീകലിതതനുലതെ
വേദമാകുന്നശാഖീ
കൊമ്പത്തന്നെയ്യാടുപൂക്കുംകുസുമതതിയിലെ
ന്തുന്നപൂന്തോൾകുഴമ്പെ
ചെമ്പൊൽതാർബാണഡംഭപ്രശമനസു
കൃതൊപാത്തസൌഭാഗ്യലക്ഷ്മീ
സമ്പത്തെകുമ്പിടുന്നെൻകഴലിണവലയാ
ധീശ്വരിവിശ്വനാഥെ.

(b) പാലംഭോരാശിമദ്ധ്യേശശധരധെവളെ
ശെഷഭോഗെശയാനം
മേളംകൊലുംകളായ ദ്യുതിയൊടുപട
തല്ലുന്നകാന്തിപ്രവാഹം
നാളംനെറിത്തുളുമ്പുംനിതുപമകരുണാ
ഭാരതിമ്യൽകടാക്ഷം.
നാളീകത്താരിമാതിൻകുളിർമുലയുഗളി
ഭാഗ്യധേയംഭജേഥാഃ.

(c) ദെവതാകൃതവിരോധശാന്തയെ
ദേവതാനമമെവയുജ്യതെ
മാതൃതാഡിതകുമാരരൊദനാ
മാതരേഹിപരിപാഹിമാമിതി.

(1) ൦൯ം ശ്ലോകങ്ങളെ വ്യാഖ്യാനിച്ച അൎത്ഥം പറക.

(2) (a) ശ്ലോകം ആരെ കൊണ്ടാണ. ഇതിൻെറ വൃത്തം എന്ത?

(3) (b) ശ്ലോകത്തിന്ന സദൃശമായ രണ്ട മലയാളവൃത്തം എഴുതാമൊ.

(4) നൈഷധചമ്പു ഉണ്ടാക്കിയ കവിയാൽ വേറെ ഏത ഗ്രന്ഥമെങ്കിലും ഉണ്ടാക്കപ്പെട്ടിട്ടുണ്ടൊ.

II. (a) (1) നാലഞ്ചുനാഴികകൊണ്ടുരജനിയും
ചാലവെകാലംകഴിച്ചുഎന്നാരവർ.

(2) പാണിതന്നുടെവൃത്തിവിലൂദളങ്ങൾ
കൊണ്ടുതവാൎച്ചനം
വാണിവൃത്തിമമാസ്തുവഹ്നണനാ
മഗണസങ്കീൎത്തനം.

(3) നാരിമാരെവിശ്വസിക്കുന്നപുരുഷൻ
നാരാചസമുഖനെന്നുധരിക്കണം.

(4) ഭാനുമാൻജലംപ്രതിവെവ്വേറെകാണുംപോലെ.

ഇതുകൾക്ക സദൃശമായ വൃത്തങ്ങൾ പഠിച്ച പുസ്തകങ്ങളിൽനിന്ന എഴുതുക.

(b) കഴിയുന്നടത്തോളം കവിയുടെ വാക്കിൽ തന്നെ നള "പൃഥ്വീനാഥചരിത്ര വിശേഷം" എഴുതുക.

III. (a) ഗദ്യവും ദണ്ഡകവും തമ്മിൽ എന്ത വ്യത്യാസം.

(b) സാധു ആർ - സാധു എന്നപദം എന്ത അർത്ഥങ്ങളിൽ ശംബരവധത്തിലും നൈഷധചമ്പുവിലും ഉപയോഗിച്ചിരിക്കുന്നു

(c) മോക്ഷകാരണം എന്ത?

(d) മായയാകുന്നതു നിർണ്ണയമതിനാലെ ഏത?

(e) ഉക്തമായിതു ഭക്തിസാധനം നവവിധം ഏതെല്ലാം?

IV. (a) താഴെപറയുന്ന പദങ്ങളുടെ ഉപയോഗങ്ങളിൽഏതെങ്കിലും വിശേഷമുണ്ടൊ.

കൊലും - കെട്ടാവു - നെരല്ലാ - മകളുരിൽ - ആലോക്യാമും-കെട്ടവാരാ - ചെമ്മെറും - തൂത്തു.

(b) അസ്തുതെഭദ്രം.

ഭദ്രംതെ രഘുനാഥമാനയക്ഷിപ്രം.

ഇതുകളുടെ പ്രയോഗങ്ങളിൽ എന്ത വ്യത്യാസം.

V. (a) ശ്രീരാമൻ അത്രിയുടെ ആശ്രമംവിട്ട ശബര്യാശ്രമത്തിൽ എത്തുന്നവരെ നടന്ന വഴി ഏതന്നും വഴിമദ്ധ്യത്തിൽ ആരെ എല്ലാം കണ്ടു എന്നും പറക.

(b) സ്ത്രീ വിദ്യാഭ്യാസത്തെകുറിച്ചും സ്ത്രീകളുടെ

നടവടികളെകുറിച്ചും നൈഷധ ചമ്പു വിൽനിന്നു എന്തറിയാം.

(c) നളനെ പരകൃത്യലോലൻ എന്നു പറഞ്ഞതു ശരിയാണൊ? പിന്നത്തെ ശ്ലോകത്തിൽ മുദിതാത്മ എന്നും പറഞ്ഞിരിക്കുന്നു. പരകൃത്യലോലനായിരുന്നാൽ ആ സ്ഥിതിയിൽ മുദിതാത്മാവാകുമൊ.

VI (a) താഴെ എഴുതിയിരിക്കുന്ന ഉപമകൾ ഏതേതു സംഗതികളെ ഉദ്ദേശിച്ച ഉപയോഗിച്ചിരിക്കുന്നു.

(1) പാടെകനം പകൽ വിളക്കുകളെന്ന പോലെ.

(2) പൂർണ്ണചന്ദ്രമാരാദനനുചിരോഹിണീ യെന്നപോലെ

(b) താഴെ എഴുതിയിരിക്കുന്ന വൃത്തങ്ങളിൽ അലങ്കാരങ്ങൾ ഉണ്ടൊ. ഉണ്ടെങ്കിൽ എന്ത.

(1) വർണ്ണവിലോപം വ്യാകരണത്തിൽ തന്നെ കേവലമുള്ള കേൾപ്പാൻ.

(2) അദ്ധ്വരത്തിങ്കൽ ചെന്നു ശൂനകൻ മന്ത്രംകൊണ്ടു ശുദ്ധമാംപുരോഡാശം കൊണ്ടുവന്നതുപോലെ.

(3) .....കളിപ്പതിന്നഞ്ചിത ശ്രീതഞ്ചിടും അദ്രിനികരംപുന രെന്നപോലെ.

(4) പുത്തൻ പരാഗനികരങ്ങളെ വാരിമെ
ന്മേൽ ഊതിടിനാനുടനുടൻ പവ
മാനപോതാഃ.

VII. (a) വിവാഹം എത്രവിധം.

(b) ദമയന്തിവിവാഹം ഇതിൽ ഏതിൽ ചേ
ന്നത.

(c) ദമയന്തിയുടെ വിവാഹക്രിയകൾ എപ്പോൾ
എവിടെവെച്ച അവസാനിച്ചു.

(d) വിവാഹത്തിലെ ക്രിയകൾ ഏതെല്ലാം പ്ര
ധാനമായി കവിപറയുന്നു.

VIII. (a) മുമ്പിൽ നീ നടക്കെണം വഴിയെ വൈദേ
ഹിയും പിന്നാലെ ഞാനും നടന്നീടു
വൻ ഗതഭയം.

(ഇതിന്നു ഒന്നിലധികം അൎത്ഥം പറക.)

(b) രാമകഥായാമെന്നിതൊഴിഞ്ഞൊരു
ദൂഷണചരിതംകേട്ടീലാരും.

(c) നീലോല്പലശ്രവികലന്നിലങ്ങൾതൊറും
നീളപ്പരന്നുശുശുഭെശശിപാദജാലം
മേളംതുടന്നയമുനാനദിയൊടുമധ്യാ
മേളിച്ചജഹ്നുതനയാജലമെന്നപോലെ.

(d) സഹമത്തെഭ്രമിപ്പിച്ചുകൊണ്ടീടുവാൻ

(e) ഇന്നലെകന്നികൊണ്ടൊന്നിനന്നംകൊടു
ത്തീടിനെൻ
പിന്നെമ്മുന്നുണ്ടുമൂലംമുതൽകാൽപിറന്നിട്ടു.

(*f*) ദൈവമെമ്മവലത്തുനില്ക്കുവലയിക്കൊലാ.

(*g*) രണ്ടുംചിത്തെനിരന്നീലിതുതവവദനഛാ
യയാണ്ടാനറിഞ്ഞെൻ.

(ഠരം അൎത്ഥം പലപ്രകാരേണകവി വേറെ
ശ്ലോകങ്ങളിൽ ജനിപ്പിച്ചിട്ടുണ്ട. രണ്ടെ
ങ്കിലും പറക.)

(*h*) സൎവ്വത്തുഗുണഗണസമ്പന്നമനുപമം.

(*i*) മഹിതകടാക്ഷവിക്ഷേപിതാമരശുചം.

(*j*) കീൎത്ത്യാപാൽപ്രായമാക്കി.

(*k*) ഉന്മേഷനിമേഷങ്ങൾ ദിനരാത്രിയല്ലൊ.

(*l*) ഝില്ലിഝങ്കാരനാദമണ്ഡിതസിംഹവ്യാഘ്ര
ശല്യാദി മൃഗഗണകിൎണ്ണം.

(*m*) കാരണപുരുഷകംസവിനാശന
ചാരണസേവിതചാരുദയാലൊ
വാരണപാലകവാരിജലോചന
ദാരുണവൈരിവിദാരുണവന്ദെ.

(*n*) താരുണ്യം തരുണെന്ദുബിം ബവദനം ലോ
കത്രയിമോഹനം.

ഇതുകളുടെ അൎത്ഥം വ്യക്തമായി പറക.

IX പ്രസേദിവാംസൊവിബുധാഃ
പ്രശംസന്തസ്തുയൊഗ്ഗുണാൻ
വരവദ്ധ്യായ്യഥാകാമം
വരാന്ദതാത്തിരോഭവൻ.

(1) വരങ്ങൾ ഏതെല്ലാം

(2) ൦രം വരങ്ങളെകൊണ്ടു ഉപകാരം ഉണ്ടായൊ.

(3) ൦രം ശ്ലോകത്തിനെ പദം മുറിക്ക.

(4) പദങ്ങൾകൂട്ടി ചേൎത്തിരിക്കുന്ന സന്ധികൾ ഏതന്ന പറക.

WEDNESDAY, 17TH DECEMBER, 2 TO 5 P M.

MALAYALAM. TRANSLATION AND COMPOSITION.

I. Translate into Malayalam—[See Urdu Translation paper, p. cm]

II. Subject of a short Essay in Malayalam:
The qualities which most conduce to success in life
(ഐഹികത്തിൽഅഭിവൃദ്ധിയുണ്ടാകേണ്ടതിന്നവിഹിതമായ ഗുണങ്ങൾ.)

III. Translate into English—

(a) ചേതസിഭാൎയ്യാഹരണോദ്യതനായനിന്നെ
സോദരബുദ്ധ്യാകരുതീലരാഘവനെതും
രാമനെയൊചിഞ്ഞുഞാൻ മറെറാരുപുരുഷനെ
രാമപാദങ്ങളാണതീണ്ടുകയില്ലയല്ലൊ
ഇത്തരംവാക്കുകേട്ടുസൌമിത്രിചെവിരണ്ടും
സത്വരംപോത്തിപുനരവളൊടുരചെയ്യാൻ
നിനക്കുനാശമടുത്തിരിക്കുന്നിതുപാരം
എനിക്കുവിചാരിച്ചാൽതടുത്തുകൂടയല്ലൊ
ഇത്തരംചൊല്ലിടുവാൻതോന്നിയതെന്തെ
ചണ്ഡീ
ധിഗ്ധിഗത്യന്തംക്രൂരചിത്തംനാരികൾക്കെല്ലൊ

വനദേവതമാരെപരിപാലിച്ചുകൊൾവിൻ
മനുവംശാധീശ്വരപത്നിയെവഴിപൊലെ
ദേവിയെദേവകളെഭരമേല്പിച്ചുമന്ദം
പൂർവ്വജൻതന്നെകാണ്മാൻനടന്നുസൌമിത്രിയും.

അന്തരംകണ്ടുദശക സ്ഥാനൻമദബാണാന്ധനായവതരിച്ചീടിനാനവനിയിൽജടയുംവല്ക്കലയും ധരിച്ചുസന്ന്യാസിയായുടജാങ്കണെവന്നുനിന്നിതുദശാസ്യനുംഭി ക്ഷുവേഷത്തെപ്പണ്ടുരക്ഷോനാഥനെക്കണ്ടുതക്ഷണംമായാസീതാദേവിയും വിനീതയായിനതപാസം പൂജ്യഭക്ത്യാഫലമൂലാദികളും ദത്വാസ്വാഗതവാക്യമുകത്വാപിന്നെയുംചൊന്നാൾ അന്ത്രെവഫലമൂലാദികളുംഭുജിച്ചു കൊണ്ടിത്തിരിനെരമിരുന്നീടുകതപൊനിധെ ഭർത്താവുവരുമിപ്പൊൾതപ്രിയമെല്ലാംചെയ്യും ക്ഷുത്തുഡാർത്തിയുംതീർത്തുവിശ്രമിച്ചാലുംഭവാൻ.

(b) ആശയത്തിൽകനിവുള്ളദാശരാജൻജയിക്കെണം
പാശപാണിഭഗവാനുംപ്രസാദിക്കെണം.
മീനരൂപംധരിച്ചൊരുദാനവാരിതുണക്കെണം,
ദീനമെല്ലാംകളഞ്ഞെന്നെകാത്തുകൊളെളണം.
തോണിയെല്ലാംജലന്തന്നിൽആണുപോകാതിരിക്കെണം,
ക്ഷീണഭാവംശമിപ്പാനുംകടാക്ഷിക്കെണം,

മത്സ്യഗന്ധിയൊരുകാലംമാനമൊടെയിരുന്ന
നാൾ, വിസ്മയിച്ചുപരാശരൻകണ്ടുകാമിച്ചു.
മാമുനീന്ദ്രനണഞ്ഞാശുകാമപീലതുടന്നപ്പോൾ
ശ്യാമളാംഗനൊരുബാലൻപിറന്നാനല്ലോ.
ഭാസുരനാമവനന്നെവ്യാസനെന്നുപറയുന്നു
ഭൂസുരന്മാക്കൊരുനാഥൻതാപസശ്രേഷ്ഠൻ.
കർമ്മദോഷങ്ങളെനീക്കിധർമ്മമേകംനടത്തേണം,
നിർമ്മലാംഗമുനിവ്യാസകൈതൊഴുതീടാം.

(o) ഭവനം ചമെയ്യൊൻ ആരംഭിക്കുമ്പോൾ മുഖ്യമായി ശരീരസുഖപ്രദമാകുന്ന ശുദ്ധവായുവിലസുവാൻതക്ക പ്രദേശം തന്നെയൊ എന്നും ജീവദായകമായ ശുദ്ധജലം അവിടെ ഉണ്ടാകുമൊ എന്നും അവരണ്ടിന്നും ഒരെപ്രദേശം അനുകൂലമായിരിക്കുമോ എന്നും ആകുന്നു ആലോചിക്കെണ്ടത ശരീരസുഖത്തിന്നടുത്ത ശുദ്ധവായു ഭവനത്തിൽ വിലസെണമെന്നുദ്ദേശിക്കുമ്പോൾ സുഖീയവൃത്തികളെല്ലാം അതിലടങ്ങും. അങ്ങിനെയുള്ള സുഖകരപ്രദേശങ്ങളാന്നവ ജനാധിക്യം കുറഞ്ഞും നീരും ചേറും ദുർഗ്ഗന്ധവും സമപത്തിൽ സ്മശാനവും ഇല്ലാതെയും ആറു, കുളം, വിളനീലം, ഇവററിൻെറ സമനിരപ്പിൽനിന്നു താണതല്ലാതെയും ചരൽ പ്രദേശമായും ഉന്നതമായും സമതലമായും ഉള്ള പ്രദേശങ്ങളാകുന്നു.

THURSDAY, 18TH DECEMBER, 10 A.M. TO 1 P.M.

ALGEBRA AND GEOMETRY.

I. Solve $(x+m)^{\frac{2}{3}} + (x-m)^{\frac{2}{3}} = \left(n + \frac{1}{n}\right)(x^2 - m^2)^{\frac{1}{3}}$.

II. (*a*) If x is real, shew that $ax^2 + bx + c$ and a differ in sign only when the equation $ax^2 + bx + c = o$ has real roots and x is taken to lie between them.

(*b*) If x is real, the value of $\frac{(x-1)(x+3)}{(x-2)(x+4)}$ does not lie between $\frac{4}{5}$ and 1.

III. If a, b, c, d, are proportionals, shew that $\frac{ma+nb}{pa+qb} = \frac{mc+nd}{pc+qd}$; and that $\frac{a^2}{b} : \frac{c^2}{d}$ is inversely as $\frac{a}{b^2} : \frac{c}{d^2}$.

IV. (*a*) Find the mth term of a *H.P.* whose first term is a, whose last term is c, and whose number of terms is n.

(*b*) Shew that the sum of n terms of a *G.P.* beginning with the pth term is r^{p-q} times the sum of an equal number of terms of the same series beginning with the qth term.

V. (*a*) Assuming the truth of the Binomial Theorem when the exponent is a positive integer, prove it for any positive exponent.

(*b*) Find the $(2n+1)^{th}$ term from the beginning in the expansion of $\left(x - \frac{1}{x}\right)^{3n}$.

VI. (*a*) The interior angles of any rectilineal figure together with four right angles are together equal to twice as many right angles as the figure has sides.

(*b*) The alternate sides of a regular hexagon are produced to meet. Shew that the triangle formed is equilateral.

VII. (*a*) Describe an isosceles triangle having each of the angles at the base double of the third angle.

(*b*) If ABC be such a triangle with the base BC, prove that the side of a regular pentagon inscribed in the circle passing through the middle points of AB, AC, BC, is equal to a half of BC.

VIII. (*a*) Equal triangles which have one angle of the one equal to one angle of the other have their sides about the equal angles reciprocally proportional.

(*b*) If ABC, ADE, be two such triangles so placed that BA, AE are in the same straight line and also CA, AD in the same straight

line, and if CE be joined and a line FAG be drawn through A parallel to CE and terminated by BC, DE, shew that FG is bisected at A.

THURSDAY, 18TH DECEMBER, 2 TO 5 P.M.

TRIGONOMETRY AND EUCLID, BOOK XI.

I. Shew how to connect the circular measure of an angle with the measure of the same angle in degrees.

II. (*a*) Trace the changes in the tangent of an angle as the angle varies from $\frac{\pi}{4}$ to $\frac{5\pi}{4}$.

(*b*) Find the least value of the expression $\tan^2\theta + \cot^2\theta$ as θ varies from $\frac{\pi}{2}$ to π.

III. (*a*) Shew that

$$\left\{\text{Sin } 2A + 2 \text{ Sin } (A+B) + \text{Sin } 2B\right\}^2 + \left\{\text{Cos } 2A + 2 \text{ Cos } (A+B) + \text{Cos } 2B\right\}^2 = 16 \text{ Cos}^4 \frac{A-B}{2}.$$

(*b*) Find all the values of θ which satisfy the equation $\sin 5\theta - \cos 3\theta - \sin\theta = 0$.

IV. If in a triangle $(a^2 + b^2)\sin(A-B) = (a^2 - b^2)\sin(A+B)$, the triangle is isosceles or right-angled.

V. (*a*) Assuming the expression for $\cos A$ in terms of the sides of a triangle, prove that $\cot\frac{A}{2} = \sqrt{\frac{s(s-a)}{(s-b)(s-c)}}$.

(*b*) The sides of a triangle are 4, 5, 6 feet respectively. Determine the least angle, having given $\log 7 = 8450980$, $L \tan 20^\circ{\cdot}42' = 9\ 5773407$, $L \tan 20^\circ{\cdot}43' = 9\ 5777226$.

VI. Assuming the series for $\log_e(1+x)$, prove that

$$\log_e n - \log_e(n-1) = 2\left\{\frac{1}{2n-1} + \frac{1}{3(2n-1)^3} + \frac{1}{5(2n-1)^5} + \text{\&ca.}\right\}$$

VII. (*a*) Find an expression for the radius of the circle circumscribing a triangle:

(*b*) The triangle DEF is formed by drawing CE, AF, BD at right angles to the sides BC, CA, AB of a triangle respectively.

Shew that the radius of the circle circumscribing DEF is R (cot A + cot B + cot C), where R is the radius of the circle circumscribing the triangle ABC.

VIII. If two straight lines be at right angles to the same plane, they shall be parallel to one another.

IX. Draw a straight line perpendicular to a given plane from a given point without it.

X. AB is the line of intersection of any two planes. A straight line PQ is drawn perpendicular to one of these planes, and from P, Q, Pp, Qq are drawn perpendicular to the other plane. Shew that pq is at right angles to AB.

FRIDAY, 19TH DECEMBER, 10 A.M. TO 12 NOON.

HISTORY OF ENGLAND.

I. (*a*) What was the origin of the House of Tudor, and what right had Henry of Richmond to the Crown of England?

(*b*) Draw genealogical tables to show—

(1) The descent of James I from Henry VII.

(2) The descent of William III and George I from James I.

II. What title had Lady Jane Grey to the Crown? On what grounds and with what object did the Duke of Northumberland, on the death of Edward VI, proclaim her Queen?

III. What steps were taken by the Long Parliament previous to the outbreak of the Civil War to limit the power of the Crown?

IV. Give some account of Charles the First's interference with religious affairs in Scotland, and of the results of this interference up to 1640.

V. Specify the chief provisions of the Bill of Rights.

VI. What defects in the constitution of Parliament was the Reform Bill of 1832 intended to correct? Relate the history of the Bill in Parliament, and specify its chief provisions

VII. What led to the Crimean War? Name, in chronological order, the chief battles fought, and give the terms of the Treaty of Paris.

VIII. (*a*) With what important historical events are the following names associated:—Sir Edward Poynings, William Wilberforce; Daniel O'Connell?

(*b*) Assign events to the following dates:—1588; 1746; July 4th, 1776; January 1st, 1801.

(*c*) Write short notes on each of the following:—The South Sea Bubble; The Act of Uniformity; The bloody Assize; The Gordon Riots.

FRIDAY, 19TH DECEMBER, 12-5 TO 2-5 P.M.

HISTORY OF GREECE.

I. The physical characteristics of Greece contributed largely towards shaping the course of Grecian History and developing a high degree of political skill among its inhabitants. You are required to indicate what you consider to be the chief geographical peculiarities contributing towards this result and to show *very briefly* the manner in which they operated.

II. Name *six* of the leading Greek States or Powers from B.C. 500 to B.C. 146. Describe, in general terms, the character of the Government of each; and, in one sentence for each State, point out what you conceive to have been the chief basis of its power.

III. (*a*) Explain the terms '*ephor*,' '*archon*.'

(*b*) What was the Amphictyonic Council?

(*c*) What is meant by the Olympic æra? How would you express the date of the foundation of Rome in this æra?

IV. (*a*) Construct a table similar to the subjoined and give the information required by the headings over each column, with reference to the following battles:—Salamis, Ægospotami, Gaugamela, Ipsus, Pydna, Leucopetra.

Name of battle.	Date.	The War in which the battle occurred and the circumstances that led to the War.	The chief political results of the battle.

(*b*) Write short notes on:—Nearchus, Demosthenes, Ptolemy Philadelphus, Herodotus.

HISTORY OF ROME.

I. (*a*) Describe the character of the constitution of Rome immediately after the expulsion of Tarquin.

(*b*) What were the chief social and political disabilities of the Plebeians?

(*c*) Explain very briefly the object and purport of the Licinian Rogations.

(*d*) What were the duties of the *censor?*

II. The Second Samnite War, Second Punic War, First Civil War, First Mithridatic War; with reference to the foregoing, you are required to give—the dates of the commencement and close of the wars,—the final or most decisive battle in each,—the circumstances that gave rise to each war.

III. Point out what you consider to be the *three* principal defects in the constitution of the Roman republic that rendered it unfit to meet the requirements of imperial sway and which made a change to absolute monarchy necessary.

IV. (*a*) Give a list with dates of the Emperors to the time of Nerva, writing opposite their names the following events according to the reigns in which they occurred:—commencement of the Dacian War; defeat of Varus; crucifixion of Jesus Christ; capture and destruction of Jerusalem; insurrection of Boadicea; final subjugation of Britain; first battle of Bedriacum destruction of Pompeii.

(*b*) With what objects did Constantine the Great (1) establish Christianity as the religion of the Empire; (2) remove the capital from Rome to Constantinople?

V. Write short notes on Cato the censor, Odoacer, Zenobia The First Triumvirate, and the battles of Allia, Beneventum, Actium, Châlons.

FRIDAY, 19TH DECEMBER, 3 TO 5 P.M.

LOGIC.

I. With regard to each of the following terms, state

(1) Whether it is general or singular.

(2) Whether it is concrete or abstract.

(3) Whether it is collective or distributive.

(4) Whether it is positive, or negative, or privative.

(5) Whether it is relative or absolute.

Sovereign, the Sovereign of England, the reigning Pope, effect, immoral, unmoral, imperialism, key, keyless, the Madras University, Army.

II. Distinguish between the Connotation and the Denotation of a term. How are they related to one another? Arrange the following terms in a series so as to exemplify this relation: mineral, Koh-i-noor, solid, diamond, inorganic substance, stone, gem.

III. State the rules of logical Definition. Examine the following definitions, and if found inaccurate, point out the rule that is violated:—

(*a*) Vice is the opposite of virtue.
(*b*) Logic is an abstract science.
(*c*) Punishment is a medicine that cures the diseases of the soul.
(*d*) Man is an animal that wears spectacles.
(*e*) Contradictory opposition is the opposition of contradictories.
(*f*) Physiology is the science of the functions of living beings.

IV. State each of the following propositions in logical form designating it by its appropriate letter; give its logical opposites, obverse and converse; and state whether it is verbal or real:—

(*a*) The virtuous alone are happy.
(*b*) Not every tale we hear is to be believed.
(*c*) Two blacks don't make a white.
(*d*) Columbus is the discoverer of America.
(*e*) A triangle is a three-sided figure.

V. Reduce to the First Figure

(1) All P is M
No S is M
∴ No S is P.
(2) Some P is M
All M is S
∴ Some S is P.
(3) Some M is not P
All M is S
∴ Some S is not P.

VI. Why is it that in the Second Figure only negative conclusions can be proved, and in the Third only particular?

VII. Examine the following syllogisms as to their validity If invalid, state the reason

(*a*) Every father is a despot; the Chinese Emperor is despotic, and therefore the father of his people.

(*b*) My servants, all of them short men, are dishonest; short men are therefore not to be trusted.

(*c*) He who is content with what he has is truly rich; a covetous man is not content with what he has, and therefore is not truly rich

VIII. Break up the following Sorites into its constituent syllogisms.

The truly happy man is virtuous.
The virtuous man is one who prefers virtue to self-interest.
He who does this must often make a sacrifices.
To make a sacrifice is painful.
The truly happy man must often do what is painful.

WEDNESDAY, DECEMBER 17TH, 10 A.M. TO 1 P.M.

URIYA—TEXT-BOOKS AND GRAMMAR.

N.B.—Particular attention should be paid to correct orthography.

I. (କ) ସଂସ୍କୃତ ମେଘଦୂତ (ତୁମ୍ଭ ପଠିତ ମେଘଦୂତ ଯେଉଁ ମୂଳଗ୍ରନ୍ଥର ଅନୁବାଦ) ଯେଉଁ ପ୍ରସିଦ୍ଧ କବିଙ୍କର ଲେଖନୀ-ନିଃସୃତ ତାହାଙ୍କର ସଂକ୍ଷିପ୍ତ ଜୀବନ-ବୃତ୍ତାନ୍ତ ଲେଖ ଏବଂ ତାହାଙ୍କର କୃତ କାବ୍ୟମାନଙ୍କର ନାମୋଲ୍ଲେଖ କର କେଉଁ କାବ୍ୟ କେଉଁ ଶ୍ରେଣୀ-ଭୁକ୍ତ ତାହାର ମଧ୍ୟ ନିର୍ଦ୍ଦେଶ କର । ମେଘଦୂତର ଅନୁକରଣରେ ଆଉ କ୍ୟ ସଂସ୍କୃତ ଗ୍ରନ୍ଥ ରଚିତ ହୋଇଅଛି ?

(ଖ) ରସ କେତେ ପ୍ରକାରେ ? ସେମାନଙ୍କର ନାମ ନିର୍ଦ୍ଦେଶ କର । ମେଘଦୂତରେ କେଉଁ ରସର ଅବତାରଣା ହୋଇଅଛି ?

(ଗ) କୌଣସି ୟୁରୋପୀୟ ପଣ୍ଡିତ କାଲିଦାସଙ୍କୁ ମିଲ୍‌ଟନ ଓ ସେକ୍ସପିୟରଙ୍କ ଅପେକ୍ଷା ବଡ଼ କବି ବୋଲି ମଣନ୍ତି । ଏହାର ହେତୁ ନିର୍ଦ୍ଦେଶ କରି ପାର ?

(ଘ) ନିର୍ଜୀବ ମେଘକୁ ଦୂତ କରି ପ୍ରେରଣ କରିବାରେ ଯେଉଁ ସ୍ୱଭାବ-ବିରୁଦ୍ଧ କଳ୍ପନା-ଦୋଷ ଘଟେ ସେ ଦୋଷ ପରିହାରାର୍ଥେ କାଲିଦାସ ତାହାଙ୍କର ମେଘ-ଦୂତରେ କି କୌଶଳ ଅବଲମ୍ବନ କରି ଅଛନ୍ତି ? ତୁମ୍ଭର ପଠିତ ପୁସ୍ତକର ଯେଉଁ ସ୍ଥଳରେ ସେହି କୌଶଳ-ବର୍ଣ୍ଣନା ଅଛି ତାହା ଉଦ୍ଧାର କରି ନ ପାରିଲେ ତହିଁର ସାରାଂଶ ଲେଖ ।

II. ହିନ୍ଦୁମାନଙ୍କର ପ୍ରାଚୀନ ଗ୍ରନ୍ଥାଦି ପାଠ କଲେ ସେ-ମାନଙ୍କର ଭୌଗୋଳିକ ଜ୍ଞାନ ସମ୍ବନ୍ଧରେ କଣ କୁହା ଯାଇ ପାରେ ? ମେଘଦୂତରେ ମେଘର ରାମଗିରି-ଠାରୁ ଅଳକା ଗମନ ପର୍ଯ୍ୟନ୍ତ ଯେଉଁ ଦେଶ ପ୍ରଭୃତିର ବର୍ଣ୍ଣନା ଅଛି ସେଥିରୁ କାଲିଦାସଙ୍କ ଭୌଗୋଳିକ ଜ୍ଞାନ ସମ୍ବନ୍ଧରେ କି ମତ ପ୍ରକାଶ କରି ପାର ? ଉଦାହରଣ ଦ୍ୱାରା ତୁମ୍ଭର ସ୍ୱୀୟ ମତ ସମର୍ଥନ କର ।

III ନିମ୍ନୋଦ୍ଧୃତ ପଦ୍ୟମାନଙ୍କର ସମ୍ପୂର୍ଣ୍ଣ ବ୍ୟାଖ୍ୟା ଲେଖ ।

(1) କାମଗୁପ୍ତି ସତିବ ତୁମ୍ଭେ ଇନ୍ଦ୍ରର,
ଦୂତ-ବନ୍ଧୁ ମୁ, ମୋତେ କରୁଣା କର ।

(2) ଶ୍ରୁତି-ମଧୁର ତୋର ନାଦ ଗମ୍ଭୀର
(ଭୂଷଣ ଯାହା ଧରି ଦେବୀ ଶରୀର
ନବ-କଦଳୀ-ଦଳ ଶ୍ୟାମଳ ବାସେ)
ମିଳାଇବ ତୋ ସଙ୍ଗୀ ଆଣି ଆକାଶେ ।

(3) ବଳ୍ମୀକ-ଶିଖାଗ୍ରରୁ ହୋଇ ବାହାର,
ସୁରେନ୍ଦ୍ର-ଚାପ-ଲତା ବଣେ ବାହାର ।

(4) ମନୋରଞ୍ଜନ ଗିରି ଶୋଭା ଦେଖିବେ,
ନଗଙ୍କୁ ପୃଥ୍ୱୀ-ସ୍ତନ ବୋଲି ମଣିବେ ।

(5) ଜଳ-ଅଙ୍ଗେ ରଚିତ ଭୂକ୍ତ ଯେସନ,
ତେସନେ ଏ ଚିତ୍ରିମା ରମ୍ୟ ଦର୍ଶନ ।

(6) ଫିଟାଇ ପୂର୍ବ ଆଶା ସ୍ୱର୍ଣ୍ଣ ତୋରଣ,
ମୌକ୍ତିକ-ବ୍ରଜ ପଦ୍ମକରେ ବହନ,
ବୁଣିବ ଯେବେ ରଙ୍ଗେ ଉଷା ରଙ୍ଗିଣୀ,
ସେ ସମୟେ ଛାଡ଼ିବୁ ତୁ ଉଚ୍ଛୟିମା ।
ପ୍ରାତେ ଖଣ୍ଡିତା ପାଶେ ନାୟକ ଆସି,
ସ୍ନେହେ ପୋଛନ୍ତି ନେତ୍ର-ସଲିଳ-ରାଶି,
ଏଣୁ ନଳିନୀ-ପଦ୍ମ-ନୟନ ମାର
ପୋଛିବେ ନିଜ କରେ କାନ୍ତ ମିହିର ।

(7) ପଦ୍ମୋଦର-ସୋଦର ବର ବଦନେ,
ଲାଜ ରାଗ ଉଜଳେ ରାଗ ରମଣେ ।

(8) ବିଳାସ-ପଦ୍ମାକର-ହଂସୀ, ନବୀନା ।

(9) ମୀନଚକ୍ରଳେ, ଚଳ କମଳ ପରି,
ସ୍ଫୁରିବ ବାମନେତ୍ର ବେଗେ ସଂଚରି ।

(10) ମଧୁ ଛଆଗୁଁ ଆଗ ଭ୍ରୂ ବିଳାସ,
ନ ଥିବ ସେ ଧୂରୁବ ବକ୍ର-ବିକାଶ ।

(11) ସେ କାଳେ ବାଳା ଯେବେ ଥିବ ନିଦ୍ରିତ,
ଅନାଇ ଅବସର ଥିବ ସ୍ତମ୍ଭିତ ;

ଦୁଃଖୀ ପକ୍ଷେ ମାଇବ ! ନିଦ୍ରା ଶରଣ,
ନିଦ୍ରା ଦିଅଇ ସ୍ୱପ୍ନ, ସ୍ୱପ୍ନ ରମଣ ।

(12) ମହତ ଜନର ଏ ରୀତି ଅଟେଲ,
ଅଭୀଷ୍ଟ-ଦାନ ପ୍ରତି-ବାଣୀ କେବଳ ।

IV (କ) ତୃତୀୟ ପ୍ରଶ୍ନାନ୍ତର୍ଗତ ରେଖା-ଚିହ୍ନିତ ପଦମାନଙ୍କର ସମାସ ଓ ସମାସ-ବାକ୍ୟ ଲେଖ ।

(ଖ) ଉକ୍ତପ୍ରଶ୍ନାନ୍ତର୍ଗତ କବିତାମାନଙ୍କରେ ଯେଉଁଠାରେ ଯେଉଁ ଅଳଙ୍କାର ଅଛି ତାହାର ନାମୋଲ୍ଲେଖ କର ।

(ଗ) ସେହି ପ୍ରଶ୍ନାନ୍ତର୍ଗତ ଦୁଇ ସଙ୍ଖ୍ୟକ କବିତାର ଦ୍ୱିତୀୟ ପଂକ୍ତିସ୍ଥ "ଯାହା" କେଉଁ ପଦର ସହିତ ଅନ୍ୱିତ ଏବଂ ସେହି ପଂକ୍ତିସ୍ଥ "ଶରୀର" ପଦ କେଉଁ ବିଭକ୍ତିରେ ଅଛି ?

(ଘ) କଥିତ ପ୍ରଶ୍ନାନ୍ତର୍ଗତ ଦଶ ସଙ୍ଖ୍ୟକ ପଦ୍ୟ-ଦ୍ୱୟ ଗଦ୍ୟାକାରରେ ଲେଖ । କୌଣସି ପଦର ରୂପାନ୍ତର ଆବଶ୍ୟକ ବୋଧ ହେଲେ ତାହା କରିବ ।

V. (କ) ନିମ୍ନୋଦ୍ଧୃତ କବିତାମାନଙ୍କରେ କି କୌଣସି ସମ୍ବନ୍ଧ ରହିଅଛି ?

(1) ପ୍ରିୟ ସଖା ତୋହର ଏ ଧର୍ମଧର —
ଦେହେ ଧରନ୍ତି ରାମଚନ୍ଦ୍ର ପୟର,
ତେଣୁ ଅଟନ୍ତି ଗିରି ଅତି ପବିତ୍ର,
ମିଶି ତୁମ୍ଭର ଗିରି ନୋହେ ବିଚିତ୍ର ।
ଉଭୟେ ଯଥାକାଳେ ହେଲେ ମିଳିତ,
ପ୍ରେମ-ଅଶ୍ରୁ-ପ୍ରବାହ ବହେ ତ୍ୱରିତ ।

(2) ଭ୍ରୂ-ଭଙ୍ଗୀ-ବିମୋହନ ବାମା-ବଦନ
ତୁମ୍ଭେ ନାଗର ଯେହ୍ନେ ରସେ ମଗନ,
ବେସିବଣ-ବଦନ ତୁମ୍ଭି ହୁରଷେ,
ତୁ ପୁଣି ନବଘନ ! ମଜନୁ ରସେ ।

(ଖ) ନିମ୍ନୋଦ୍ଧୃତ ପଦ୍ୟମାନଙ୍କରେ କି ପ୍ରକାରବାକ୍ୟର ଉଲ୍ଲେଖ ଅଛି ?

(1) ଭୁଜଗ-ଶେଯୁଁ ଯେବେ ଉଠିବେ ହରି,
ଲଭିବ ବାସେ ଡୋଡେ ଧୁଣି ସୁନ୍ଦରି ।

(2) ଅନମ୍ବରେ ଅମ୍ବୁଦ ! ଦିଗବାରଣେ
ତ୍ୟଜିବେ କର-ଗର୍ବ ତୁମ୍ଭ ଦର୍ଶନେ ।

VI. (କ) ମେଘଦୂତ ରଚନାରେ କିଏ ଛନ୍ଦ ବ୍ୟବହୃତ ହୋଇଅଛି ? ସେମାନଙ୍କର ଲକ୍ଷଣ ଲେଖ ।

(ଖ) ଉତ୍ତର ମେଘର ଶେଷ ଭାଗରେ କୌଣସି ଅସ୍ପଷ୍ଟ ଦୋଷ ଥିଲେ ଦେଖାଅ ।

VII. ନିମ୍ନୋଦ୍ଧୃତ ବାକ୍ୟମାନଙ୍କର ସ୍ଫୁଟାର୍ଥ ବୁଝାଇ ଦିଅ ।

(1) ସର୍ବ ପ୍ରକାର ସୌନ୍ଦର୍ଯ୍ୟ ତୁଳନା-ସାପେକ୍ଷ ।

(2) ଦର୍ଶନେନ୍ଦ୍ରିୟ ବିଷୟୀଭୂତ ସୌନ୍ଦର୍ଯ୍ୟର ଆହୁରି ଦିକ ତେଗୁଡିଏ ଉପକରଣ ଅଛି । ତନ୍ମଧ୍ୟରେ ବର୍ଣ୍ଣ, ଉଜ୍ଜ୍ୱଳତା ଏବଂ ବୈପରୀତ୍ୟ ପ୍ରଧାନ ।

(3) ନିବିଷ୍ଟ ଚିତ୍ତରେ ଆଲୋଚନା କଲେ ଏହା ବିଶଦରୂପେ ପ୍ରତିପନ୍ନ ହେବ ଯେ ଏହି ରୁଚି-ବୈଷମ୍ୟମୂଳରେ ଶକ୍ତି-ଭେଦ, ଶିକ୍ଷା-ଭେଦ ଓ ପ୍ରବୃତ୍ତି-ଭେଦ ଏହି କାରଣମାନ ବିଦ୍ୟମାନ ଅଛି ।

(4) ଯେମନ୍ତ କେନ୍ଦ୍ରାଭିକର୍ଷିଣୀ ଓ କେନ୍ଦ୍ରାପସାରଣୀ ନାମକ ପରସ୍ପର ବିରୁଦ୍ଧ ଶକ୍ତି-ଦ୍ୱୟ ଦ୍ୱାରା ଏହି ଅଖିଳ ବିଶ୍ୱ ସଂରକ୍ଷିତ ଓ ପରିଚାଳିତ ହୋଇଅଛି ସେହି ପରି ଉପର୍ଯ୍ୟୁକ୍ତ ଆଧ୍ୟାତ୍ମିକ ଶକ୍ତି-ଦ୍ୱୟ (ଅର୍ଥାତ୍ ସ୍ୱାନୁ-ବର୍ତ୍ତିତା ଓ ନିର୍ଭର-ଭାବ) ମାନବ-ସମାଜକୁ ଅନନ୍ତ ଉନ୍ନତି ଆଡ଼କୁ ଯେନ ଯାଉଅଛି ।

VIII. (କ) ନିମ୍ନ-ଲିଖିତ ପଦମାନଙ୍କର ଅର୍ଥ ଲେଖ ଏବଂ ସେମାନଙ୍କର ବ୍ୟୁତ୍ପତ୍ତି ସମ୍ବନ୍ଧରେ କିଛି ବକ୍ତବ୍ୟ ଥିଲେ ତାହା ମଧ୍ୟ ଲେଖ ।

ସମରବିଳାସିନୀ, ମନସ୍ୱିନୀ, କପୋଳ-କଳ୍ପିତ, ବୀରେନ୍ଦ୍ର-ବରଣୀୟା, ଋଦ୍ଧିମନ୍ତ, ନିରାକୃତ, ସସନ୍ତାପା, ସମବେତ, ସୌନ୍ଦର୍ଯ୍ୟ, ବିମୋହିତ, ବୈଜ୍ଞାନିକ ଓ ପ୍ରାକୃତିକ ।

(ଖ) ବାର-ଅଶ୍ରୁ ଏବଂ ଅଶ୍ରୁ-ବାର ଏଦୁଇ ପଦର କୌଣସି ପ୍ରଭେଦ ଥିଲେ ଲେଖ ।

IX. ଜାତୀୟ ସାହିତ୍ୟର ଅବଶ୍ୟକତା ବିଷୟରେ ତୁମ୍ଭ ପଠିତ ପ୍ରବନ୍ଧ-ମାଳାରୁ ଭାବ ସଂକଳନ କରି ଟୋଟିଏ ସଂକ୍ଷିପ୍ତ ଅଥଚ ସାରଗର୍ଭ ରଚନା ଲେଖ ।

WEDNESDAY, DECEMBER 17TH, 2 TO 5 P.M.

URIYA—TRANSLATION AND COMPOSITION.

N.B.—Marks will be deducted for bad spelling.

I. Translation into Uriya.

II. Subject of a short Essay in Uriya :—

The qualities which most conduce to success in life. (କ୍ଷ ଗୁଣର ସାହାଯ୍ୟରେ ମନୁଷ୍ୟ ଇହ ଜୀବନରେ ସମଧିକ କୃତକାର୍ଯ୍ୟତା ଲାଭ କରି ପାରେ) ।

III. Translate into English :—

ମୁ ଲେଖମା କକ୍ଷେପ କରି ବଣ୍ଡାୟମାନ ହେଲି । ପ୍ରକୋଷ୍ଠ-ମଧ୍ୟରେ ରହିବ କି ବାହାରକୁ ଯିବି, ଏହି ବିଷୟ ଆନ୍ଦୋଳନ କରୁଅଛି, ଏମନ୍ତ ସମୟରେ ଗୋଟାଏ ଭୟଙ୍କର ସବ୍ଦ ଶୁଣି ଅଚେତନପ୍ରାୟ ହୋଇଗଲି । ନଗରର ସମସ୍ତ ଅଟ୍ଟାଳିକା-ଚୟ ଭୂପତିତ ହେଲା ପ୍ରାୟ ଜଣାଗଲା । ଯେଉଁ ଗୃହରେ ଥିଲି ତାହା ଏପରି ବେଗରେ କମ୍ପିତ ହେବାକୁ ଲାଗିଲା, ଯେ ଉପରିସ୍ଥ ତଳ ଅଚିରାତ୍ ଭାଙ୍ଗି ପଡିଲା ଏବଂ ନିମ୍ନ-ତଳର ଯେଉଁ ପ୍ରକୋଷ୍ଠରେ ମୁ ଥିଲି, ତନ୍ମଧ୍ୟସ୍ଥ ସାମଗ୍ରୀମାନ ଇତ-ସ୍ତତଃ ବିକ୍ଷିପ୍ତ ହେବାକୁ ଲାଗିଲା ।

ସୂର୍ଯ୍ୟ ଯେ କେବଳ ଦ୍ୱୌରଜଗତର କେନ୍ଦ୍ର ଏବଂ ଚାଳକ ଅଟେ, ଏମନ୍ତ ନୁହେ । ସୂର୍ଯ୍ୟ ସୁମହାନ୍ ନାକ୍ଷତ୍ରିକ ଜଗତର ଅନ୍ତର୍ଗତ ଅଟେ । ଏହା ନକ୍ଷତ୍ରି-ରୂପେ ଗୋଟିଏ ଅପରିଜ୍ଞେୟ କକ୍ଷରେ ପରିଭ୍ରମଣ କରୁଅଛି । ଏହି ପରିଭ୍ରମଣ ଦ୍ୱାରା ସୃଷ୍ଟିକର୍ତ୍ତାଙ୍କର କି ଉଦ୍ଦେଶ୍ୟ ସାଧିତ ହେଉଅଛି, ତାହା ଅବଧାରଣ କରିବା ଅସାଧ୍ୟ । ଆମ୍ଭେମାନେ ଏଭିକମାସି କହି ପାରୁଁ ଯେ ତାହା ନିରର୍ଥକ ନୁହେ ।

ହଁ ତୁମ୍ଭକଥା ଜଣାଗଲା । ମୋତେ ଆଗରୁ ଜବାବ ଦେଇ, ଏବେ ଠକୁଛ । ଭଲ ଦେଖା ଯିବ, ତୁମ୍ଭେ କେଡ଼େ ଜାହାଣିପ୍ପା । ତୁମ୍ଭଙ୍କୁ ନାକରେ କାନରେ କଦେଇ ନ ଛାଡିବି ତ ମୁଁ ବାପର ପୁଅ ନୁହେ ।

B. A. DEGREE EXAMINATION, JANUARY, 1885.

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

ENGLISH POETRY.

The Franklein's Tale and the Monke's Tale, Macbeth; the Sicilian Summer

I (*a*) Write a note (of not more than fifteen lines) on the characteristics of Chaucer's English; illustrating your remarks by examples from three different parts of speech

(*b*) Give an example (1) of an obsolete strong preterite; (2) the use of the relative, and (3) the double negative

II. (*a*) Paraphrase —

(1) My guerdon n' is but bresting of min herte;
Madam rueth upon my peine's smerte.

(2) I wote wel, clerkes wol sain as hem lest
By arguments, that all is for the best,
Though I ne can the causes noughty know,
But thilke God that made the wind to blow,
As kepe my Lord, this is my conclusion.

(*b*) Give Chaucer's words for —

(1) He [did] not at all dread God.

(2) There is nothing, except bread, that I would rather (have)

III. (*a*) Show by quotation* from Chaucer what was meant in his day by—*Religion, Franchise,—Honesty, Penance,* and *Gentelesse.*

(*b*) 'Let it slide' is regarded as modern slang from America; how does it occur in the *Franklein's Tale?*

(*c*) In what sense does Chaucer use—*propre, fulfill, declination, likerous?*

(*d*) In what form do *merciful, empress, perfect, calculate idolater* and *between,* appear in Chaucer's Tales?

*The substance of the passages will be sufficient

IV (*a*) "I am thane of Cawdor,
If good, why do I yield to that suggestion
Whose horrid image, &c."
What is the next incident in the drama which again prompts Macbeth to the murder?

(*b*) On Lady Macbeth's entry after Macbeth's soliloquy beginning—
"If it were done when 'tis done, &c." I. 7.
What two reasons does he assign to her for deciding
"We will proceed no farther in this business"?

(*c*) Thereupon ensues a dialogue in which Lady Macbeth succeeds in altering his determination. Give, in direct narration, the purport of, or one pithy sentence from, each of the five speeches that intervene between her replying—
"Art thou afeard
To be the same in thine own act and valour
As thou art in desire?"
and Macbeth's final resolve
"I am settled, and bend up
Each corporal agent to this terrible feat."

(*d*) Give the substance of what Macbeth said when he was told Lady Macbeth was dead.

V. (*a*) Paraphrase closely, bringing out the exact meaning of the italicised words:—
M. If you shall cleave to my *consent*,—when 'tis,
It shall make honour for you.
B. *So* I lose none
In seeking to augment it, but still keep
My bosom *franchised*, and allegiance clear,
I shall be *counselled*.

(*b*) A school-edition of *Macbeth* explains the third line in the following as:—"Disagreeable as is thy presence at the door, it is better to have an assassin there than Banquo in this hall."
Macbeth. There's blood upon thy face
Murderer. 'Tis Banquo's then.
Macbeth. 'Tis better thee without than he within.

Comment upon the explanation, and say what you think the line means.

(c) *Mal.* Let's make medicine of our great revenge
To cure this deadly grief.
Macduff. He has no children!
What may have been in Macduff's mind? It is capable of two explanations. Give both.

VI (a) Quote from Macbeth *a single line* containing the same thought and simile as in "Nature's sweet restorer balmy sleep."

(b) "I cannot rest from travel; I will drink
Life to the lees." Tennyson's *Ulysses.*
What is the passage in Macbeth which the latter expression recalls?

(c) Quote from other parts of the Play a parallel to each of the following:—

(1) "To beguile the time
Look like the time . . . . Look like the innocent flower,
But be the serpent under it."

(2) "The night is long that never finds the day"

VII. (a) Man may *securely* sin, but safely never. B Jonson
Explain the above from Shakspere's use of *security.*

(b) What is Shakspere's use of—*ecstasy, fantastical, metaphysical, minutely, convince?* Illustrate each from the text.

VIII. By whom, and in what connection, was each of the following spoken?—

(a) There's warrant in that theft
Which steals itself when there's no mercy left

(b) I am cabined, cribbed, confined.

(c) Stands Scotland where it did?

(d) I'll make assurance doubly sure
And take a bond of fate.

(e) Now does he feel his title
Hang loose about him, like a giant's robe
Upon a dwarfish thief.

IX. Sketch very briefly the character of Lady Macbeth, referring to the passages in the Play in which its leading features are brought out.

X. Paraphrase closely—

(a) Think not that my life, though idly led,
Is tainted or impure or bound to sense,
Or if incapable of itself to soar
Unworthy to be lifted from the dust
By love of what is lofty.

(b) He said himself
His life, or ever it had found its law
From love and me, had still been pure.

XI. State briefly the part taken in the development of the plot of the *Sicilian Summer* by Count Ugo and Aretma.

XII. Explain—

(a) the allusion in
"we 're none of us St. Ursulas."

(b) What Ubaldo means when he says in the Ball-Room
"if a canary bird were here she would hardly sing."

(c) The force of the epithet "dimpled" as applied to the bay at the time when Fordeliza and Rosalba landed.

(d) to whom Fordeliza refers when she says, "the good old golden pippin is ripe and may drop while the gardener is getting the ladder"; and what is exact force of the saying.

(e) How it is that Rosalba's joy at seeing Silisco is
"joy that, overjoy'd, belies itself
And mimics grief."

MONDAY, 19TH JANUARY, 2 TO 5 P M.

ENGLISH PROSE.

Realmah : Bagehot's Literary Studies : Spencer's Philosophy of Style

I. What do you consider to be the most noticeable features in the policy of Realmah, the King ?

What are his claims to be regarded (1) as *a statesman*, and (2) as *an inventor* ?

II. Describe by means of a few well-chosen epithets the character of each of the following persons; Talora, the Amah, Condore.

III. What light does the author of *Realmah* throw on the social condition of man in primitive times?

IV. Give your opinion of the merits of *Realmah* as a work of art, with special reference to (1) the interest of plot, (2) the delineation of character, and (3) the style.

V. The inferences which Bagehot draws concerning Shakespeare from a study of his writings may all be summed up under a few heads. Enumerate these.

Refer to any specially characteristic passages in Macbeth in support of them.

VI. What points of resemblance does Bagehot note between Shakespeare and Scott?

Comment on the following remark of Carlyle

'Shakespeare fashions his characters from the heart outwards, and Scott fashions them from the skin inwards, never getting near the heart of them.

VII. Describe the various states of mind through which Cowper passed between the years 1765 and 1796. Describe briefly the nature of the influences by which he was affected during that interval.

VIII. Cowper stands between two literary periods. Note their distinguishing characteristics, and state the relation of the poet to each of them.

IX. What does Spencer mean by the direct form of style? How does he account for its superiority over the indirect? Note the exception.

X. How does Spencer attempt to reduce the pleasure of rhyme to the law of economy?

XI. Spencer says that opposition of two thoughts in some cases ensures impressiveness of effect. In what cases and why? Explain fully the nature of the effect.

XII. Account for the following:—

(*a*) Impassioned moods evoke figurative language.

(*b*) In description, the concrete has advantage over the abstract.

XIII (*a*) 'Napoleon the First is come and gone—the Bourbons of the old *regime* have come and gone—the Bourbons of the new *regime* have had their turn.'

What is the period covered by these events?

(*b*) Speaking of the poetry of Goethe, Bagehot says—'We have a long train, and no engine.' Explain his meaning.

(*c*) 'No slight versatility of mind and pliancy of fancy could pass at will from scenes such as these to the ward of Eastcheap, and the society which heard the chimes at midnight.' Describe the situations herein contrasted.

(*d*) 'Imogen or Juliet would have thought little of the conversation of Gorgias.' Why?

(*e*) Explain or give the meaning of:—

(1) The curse of the barren fig-tree.

(2) The painted veil which those who live call life.

(3) Shaping fantasies.

(4) Chewing the cud of sweet and bitter fancy.

(5) The deep waters had passed over him, and it was long before the face of his mind was dry or green.

(6) An unreflected light did never yet
Dazzle the vision feminine.

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

ENGLISH LANGUAGE.

I. "Philological research has found that the primitive tribe "which spoke the mother-tongue of the Indo-European family pos-"sessed our chief domestic animals. The region it inhabited was "a varied one, not bordering upon the ocean. The use of certain "metals was known; whether iron was one of these admits of ques-"tion. Barley, and perhaps also wheat was raised for food. The "art of weaving was practised; wool and hemp, and possibly flax, "being the materials employed."

Give, with a few illustrations, a general account of the process by which the above conclusions have been arrived at,

explaining how it has been inferred that the region did not border on the ocean, and why the writer speaks doubtfully as to the use of iron, wheat and flax.

II. Discuss and illustrate each of the following statements :—

(*a*) Though of the hundred thousand words or thereabout in a large English Dictionary, two-thirds at least are of classical origin, yet we cannot speak of English as a classical language.

(*b*) The sibilancy of modern English is due to French contact.

(*c*) After the Norman Conquest the English language tended to lose its grammatical complexities.

III. Show that each of the following pairs of words is an illustration both of Grimm's law and of the composite character of the vocabulary of English—*ten, decimate* :—*brother, fraternal* :—*tame, adamant* :—*other, heterogeneous.*

IV. Give the modern equivalent of each of the following old English words, and point out the reason of *all* the changes by which each word has reached its present form :—*efeta, hwilc, cuthe, scire-gerefa, cristen, thunor, gnew, farer.*

V. (*a*) In *misapprehension, iciness, gainsaying* and *songstress,* point out the root and give its meaning and the language to which it belongs :—also give the meaning and origin of each particle prefixed or suffixed to the root.

(*b*) Give the derivation and trace the history of any *four* of the following words :—*simple, gentleman, slave, idiot, gossip, dilapidate, rival, trivial, parrot, handiwork.*

(*c*) Give an example of an English word which has come into common use from each of the following sources, and show the exact force of the word given :—(1) the poems of Homer, (2) the works of Sir Thomas More, (3) the works of Cervantes, (4) the works of Swift, (5) the history of a Phrygian King, (6) the speeches of Demosthenes, (7) the name of a Roman hill, (8) the name of an infamous murderer.

VI. (*a*) Write a very brief notice of the life, works, and influence upon English literature, of Pope, *or* Scott, *or* Wordsworth.

(*b*) Concerning each of the following, state (1) to what class of literary compositions it belongs, (2) its author, (3) its approximate date :—*The Compleat Angler, Hudibras, Sartor Resartus, The Gentle Shepherd, The Prelude, the Cottar's Saturday Night, Pride and Prejudice, the Wealth of Nations.*

(*c*) From the following list of fictitious characters choose any *four* and state in what work each of these four appears and who is the author of that work —also apply two descriptive adjectives to each of the characters chosen :—*Sir Andrew Aguecheek, Mr. Burchell, Dandie Dinmont, Walter de Montreal, Amyas Leigh, Lydia Languish, Mr. Great heart, Sir Brian de Bois Guilbert, Sir Lancelot, Philammon, Hermione, Tony Lumpkin, Cordelia, Ladurlad.*

VII. (*a*) Divide the following lines into feet and mark the accented syllable in each foot :—

(1) When around thee dying
Autumn leaves are lying,—

(2) Then, when the gloaming comes,
Low in the heather blooms
Sweet will thy welcome and bed of love be !

(3) Then answered Sigurd the Volsung How long hereof hast thou known,
And what unto thee is this treasure that thou seemest to give as thine own ?

(*b*) Arrange into four tetrameter lines :—" There from isle to shore eagles scream ; the torrents roar down all the rocks ; dark mists, driven incessant o'er the black waves, infect the summer heaven."

VIII Give the meaning of any *six* of the following familiar phrases, and carefully describe circumstances in which each of the six might be suitably used ;—to prove an *alibi* ;—to break the ice ; —*en passant* ;—to turn the tables ;—*instar omnium* ;—to prick up the ears ,—to put on the drag ;—*facile princeps* ;—to hang upon the

lips of ;—to be in at the death ;—to stand the hazard of the die ;—to keep one's countenance.

IX. Great as thou art, yet parallel'd by those,
Thy countrymen, before thee born to shine,
The bards of Hell and Chivalry : first rose
The Tuscan father's Comedy divine ;
Then, not unequal to the Florentine,
The Southern Scott, the minstrel who call'd forth
A new creation with his magic line,
And, like the Ariosto of the North,
Sang ladye-love and war, romance and knightly worth

Write brief notes pointing out and explaining, where you can, all that is difficult or obscure in the above stanza. When unable to explain a difficulty, state what plan you would adopt for mastering it if you had access to books of reference.

X. Paraphrase :—

(a) Like our shadows
Our wishes lengthen as our sun declines

(b) Plate sin with gold,
And the strong lance of justice hurtless breaks :
Arm it in rags, a pigmy's straw doth pierce it.

(c) Anger is like
A full hot horse ; who being allow'd his way
Self mettle tires him.

(d) Behold the wretch who slugs his life away
Soon swallow'd in disease's sad abyss ;
While he whom toil has braced, or manly play,
Has light as air each limb, each thought as clear as day.

(e) Suspicion always haunts the guilty mind ;
The thief doth fear each bush an officer

TUESDAY, 20TH JANUARY, 2 TO 5 P M.

ENGLISH COMPOSITION.

I. Write an essay on *one* only of the following subjects —

(a) The effect of the climate and other physical features of a country in moulding the character of its inhabitants.

(b) William III his character and influence on the History of England.

(c) The comparative advantages of town and country life.

(d) Public examinations; their advantages and disadvantages.

II Write a series of three letters: the first, to a student who has just passed the First Examination in Arts from his guardian, instructing him to discontinue his studies; the second, a reply from the student requesting permission to remain at college till he takes his degree; the third, a reply from the guardian granting the student's request. Each letter should contain a statement of reasons.

NOTE—*The Essay must not exceed ten pages, nor the series of letters three pages of ordinary writing.*

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

SANSKRIT: TEXT-BOOKS AND GRAMMAR.

I. (a) Paraphrase in Sanskrit prose:

स्थानप्राप्त्या दधानं प्रकटितसमतामन्द्रता-
रव्यवस्था
निर्ह्रादिन्या विपञ्च्या मिलितमलिरुतेनेव
तन्त्रीस्वरेण।
एते दन्तान्तरालस्थितत्रणकबलच्छेदशब्दं जन-
यभ्य
व्याजिह्माङ्गाः कुरङ्गाः स्फुटललितपदङ्गीत-
माकर्णयन्ति॥
निद्रामुद्राबबन्धव्यतिकरमनिशं पद्मकोशाद-
पास्यन्

आशापूरैककर्मप्रवणनिजकरप्राणिताशेषविश्वः।
दृष्टः सिद्धैः प्रसक्तस्तुतिमुखरमुखैरस्तमग्रेषु
गच्छन्
एकः श्लाघ्यो विवस्वान परहितकरणायैव
यस्य प्रसादः॥

(b) Explain the Alankāra contained in the above given Slōkas and that of the following —

अक्लिष्टबिम्बशोभाधरस्य नयनोत्सवस्य शशिन
इव।
दयितामुखस्य सुखयति रेखापि प्रथमदृष्टे-
यम्॥

(c) Quote the Ślōkas beginning with उन्मज्जज्ज्वला-
दि, तुल्याःसम्वर्त्तकादि, and ज्वालाभ-
ङ्गैरित्यादि.

(d) Quote a Ślōka out of your text, only giving its beginning, written respectively in the Harinī, Mālinī, Śālinī, and Āryā Metre.

(e) Explain the Vigraha of the following compounds —

माद्यद्दिग्गजगण्डभित्तिकषणे, मज्झण्णसूर-
किरणसन्ताबदिउणिदो, प्रकटपटवासव्य-
तिकराः, चञ्चच्चञ्चुवग्रक्षतचुतपिशित-

लवग्रासंवृद्धगर्द्धैः, प्राप्तावसज्जज्जलधरपटलैः and उत्पातवाततरलीकृततारकाभम्.

(*f*) Transcribe into Sanskrit:

(घूर्णन्) मफलं क्खु मे सेहरअस्स जीविअं।
वच्छत्थलम्हि दद्दआ नीलुप्पलवासिआ मुहे मद्दरा।
मोसम्मि अ सेहरओ निच्चं विअ चेडिआ जस्स॥

II. (*a*) Give the Alankāras and Vigrahas occurring in the following expressions and the subjects (Visēshya) to which they refer:—

उपास्तीर्णगुरुपयोधरमण्डला, प्रौढकन्दलीमुकुलमिव रूढरागरूषितं, कर्णिकारगौरः कुरुविन्दसवर्णकुन्तलः कमलकोमलपाणिपादः, गण्डस्थलीसंक्रान्तहस्तपल्लवदर्शितकर्णवतंसकृत्यम्, महार्णवोन्मग्नमात्तर्ण्डतुरगनिःश्वासरयावधूतेव, जीवितभूतां रतिमाकृत्या कदर्थितवती and इतरेतरव्यतिषक्तकोमलाङ्गुलिदलेन भुजलताद्वयेन कन्धरां समावेष्ट्य.

(*b*) Give Sanskrit equivalents of the following:—

हिरण्यरेताः, उद्मनायत, प्रतिसमाहितः, क्षपणकविहारस्य, फणिमुखकाकली, प्रत्येतनमङ्गलानि, विचिकीर्षते and निर्ग्रन्थिकग्रहमोचितात्मा.

III. (*a*) Give the Third Person Singular Parasm. of the Aorist (Lun) in the Causative of छत्, कृप्, ईक्ष्, स्था and क्रे; the Third Person Singular Parasm. (Lat) in the Desiderative of आप्, द्रु, दरिद्रा, पत् and हन्; the Third Person Singular Ātmanepada Present (Lat) in the Frequentative of कु, गृ, श्री, and सन्.

(*b*) Name the most important Taddhita Affixes.

(*c*) What vowels are retained in Prākrit? How many Sibilants are used in Prākrit? Decline अग्नि, fire; and ज, who. What tenses are generally used in Prākrit?

IV. (*a*) Who is considered to be the author of Nāgānanda, and mention another drama which is ascribed to the same poet. To whom is the Nāndī dedicated? Give a short account of the Vidyādharas and Garuda. To what form of dramatic composition does the Nāgānanda belong?

(*b*) To what branch of Literature does the Dasakumāracharita belong? Who was its author, when was it composed? Write short notes in Sanskrit about Vasupālita, Vikaṭavarmā, and Khanati.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

SANSKRIT · TRANSLATION.

I. Translate into Sanskrit :

(a) He saw them approach like a mighty storm. "What," said he, "is it against me alone that such a countless crowd of warriors had been assembled? I have no one to help me, no father, no brother, no sister, no friends, no relatives. But I have with me the ten great virtues which I have practised: the merits which I have acquired in the practice of these virtues will be my safeguard and protection." All night the contest continued, but the angels strengthened him, and the powers of evil were defeated. An ancient Gātha relates the final victory. "Let a man but persevere with unflinching resolution, and seek supreme wisdom, it will not be hard to acquire it. When once obtained, then farewell to all sorrows; all sin and guilt are for ever done away."

(b) "A man buries a treasure in a deep pit," he observed, "which, lying day after day concealed therein, profits him nothing. But there is a treasure that man or woman may possess,—a treasure laid up in the heart,—a treasure of charity, piety temperance, soberness. It is found in the sacred shrine, in the priestly assembly, in the individual man, in the stranger and sojourner, in the father, the mother, the elder brother,—a treasure, secure, impregnable, that cannot pass away. When a man leaves the fleeting riches of this world, this he takes with him after death,—a treasure unshared with others,—a treasure that no thief can steal. Let the wise man practise virtue; this is a treasure that follows him after death."

II. Translate into English :

(a) सासुदूरंमूढात्मानञ्च तंप्रवहणेननीत्वापुरं

उदारशोभयाराजवीथ्यास्वभवनमनैषीत् ॥ अभूच्चघो-
षणाश्वः कामोत्सवइति ॥ उत्तरेद्युःस्नातानुलिप्तमार-
चितमुण्डमञ्जुमालमारब्धकामिजनवृत्तनिवृत्तस्ववृ-
ताभिलाषं क्षणमात्रगतेपितयाविनाटूयमानचित्तं तम्
षिम्टद्धिमताराजमार्गेणोत्सवसमाजंनीत्वा क्वचिदुपव-
नोद्देशे युवतिजनशतपरिवृतस्यराज्ञः सन्निधौ स्मित-
मुखेनतेनभद्रेभगवतासह निषीदेत्यादिष्टासविभ्रम-
कृतप्रणामासस्मितंन्यषीदत् ॥

(b) मधुरमिववदन्तः स्वागतंभङ्गशब्दै-
र्नतिमिवफलनम्रैः कुर्वतेमीशिरोभिः ।
ममददतदर्घ्यं पुष्पवृष्टिंकिरन्तः
कथमतिथिमपर्य्यां शिक्षिताश्शाखिनोपि ॥१॥
शशिमणिशिलासेयं यस्यांविपाण्डुरमानन
करकिसलयेकृत्वा वामेघनश्वसितोद्गमा ।
चिरयतिमयिव्यक्ताकूतामनाकस्फुरिताधरा
विरमितमनोमन्युर्दृष्टामयारुदतीप्रिया॥ २ ॥
निष्यन्दतदवानेन मुखचन्द्रोदयेनते ।
एतद्बाष्पाम्बुनासिक्तंचन्द्रकान्तशिलातलं॥३॥
णिच्चंजोपिवदसुरंजणस्सपिअसङ्गमच्चओकुणद।

अहतेदोअपिदेवावलदेवोकामदेवोअ ॥ ४ ॥
एकाकिनापिहिमया रभसावकृष्ट-
निस्त्रिंशदीधितिसटाभरभासुरेण।
आरान्निपत्यहरिणेव मतङ्गजेन्द्र-
माजौमतङ्गहतकं हतमेवविद्धि ॥ ५ ॥
आलोक्यमानमतिलोचनदुःखदायि
रत्नच्छटानिजमरीचिरुचोविमुञ्चन्।
उत्पातवाततरलीकृततारकाभ-
मेतत्पुरःपततिकिं सहसानभस्तः ॥ ६ ॥
गात्राण्यमूनिनवहन्ति सचेतनत्वं
श्रोत्रंस्फुटाक्षरपदां नगिरंशृणोति।
कष्टंनिमीलितमिदं सहसैवचक्षुः
हातातयांन्तिविवशस्य ममासवोमी ॥ ७ ॥
निराधारंधैर्य्यं कमिवशरणं यातुविनयः
क्षमःक्षान्तिवोढुंकदहविरता दानपरता।
हतंसत्यंसत्यंव्रजतुच कृपाकाद्यकृपणा
जगज्जातंशून्यं त्वयितनय लोकांतरगते ॥ ८ ॥
एतेषुहातरुणमारुतधूयमान
दावानलैःकवलितेषु महीरुहेषु।

अम्भोनचेज्जलदमुञ्चसिमाविमुञ्च
वज्रंपुनःक्षिपसि निर्दयकस्यहेतोः ॥ ९ ॥
प्रायोयत्किञ्चिदपि प्राप्नोत्पुत्कर्षमाश्रया-
न्महतः ।
मत्तेभकुम्भतटगतमेतिहिशृङ्गारतांभस्म ॥१० ॥

III Can it be maintained that the Hindu drama was derived from that of Greece?

Supposing it to be of foreign origin, from what other source, if not Greek, may it be derived?

Give clearly your reasons.

IV What different explanations of the story of the Râmâyana have been given? On what grounds? Which of these is accepted by Weber? Why?

V. What is a *Purâna*?

What is the earliest date assigned to this kind of composition? Give reasons.

VI Assign approximate dates to the following:—

Pañcatantra, Kathā—Sarıtsāgara Dasakumāracharıta, Mṛicchakatika and Mahāvīracharıta.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

LATIN TEXT-BOOKS AND GRAMMAR

I Translate.—

Sed tonitrum fit uti post auribus adcipiamus
Fulgere quam cernant oculi, quia semper ad aures
Tardius adveniunt, quam visum, quæ moveant, res,

and add notes upon the declension of *tonitrum*, the conjugation of *fulgere*, the construction of *visum*, and the reason of the subjunctives in the passage

II. (*a*) Enumerate the modes of formation of the Latin perfect

(*b*) Give examples of reduplicated perfects, and state the rules followed in reduplicating.

(c) Give any Latin words, not perfects, in which reduplication is found.

III. (a) What equivalents are used in Latin for '*both—and*'?

(b) Explain and illustrate the uses of *an*, *ne*, *utrum*, *num*, in direct and indirect questions.

IV. (a) Write down, and give the meanings of, adverbs or adverbial phrases containing *modus* or its inflections.

(b) Give the meaning and etymology of *diecula*, *obsonium*, *pecunia*, *multesima*, *scrupulus*.

V. State fully, and give (from your text-books, if you can) additional examples of, the grammatical rules illustrated in the words in italics in the following passages:—

(i) Id paves *ne* ducas *tu* illam: *tu* autem *ut* ducas.

(ii) Laudare fortunas meas
Qui gnatum *haberem* tali ingenio præditum.

(iii) Verumtamen fuit tum *sui* dissimilis.

(iv) Opus in acceptum rettulit *quadriennio post quam diem* operi dixerat.

VI. Write notes on the syntax or meaning of the italicised words in the following passages:—

(i) Dignus es, cum tua religione, *odium*. *Nodum in scirpo quæris*.

(ii) *Ire* in castra placuit.

(iii) *Optato* advenis.

(iv) Hoc *genus* in rebus *firmandum est* multa priusquam Ipsius rei rationem reddere possis.

(v) C. Verres *HS quadraginties* contra leges abstulit.

(vi) Sed ipsa dissimulatione famæ famam auxit *æstimantibus* quanta futuri spe tam *magna* tacuisset

(vii) *Singulos* sibi olim reges fuisse, nunc *binos* imponi.

VII (a) What Roman usages are referred to in the following —

(i) Quicquid peperisset, decreverunt *tollere*.

(ii) Tanta in isto improbitas putabatur ut de Philodamo *amplius pronuntiaretur*.

(iii) Oderunt Siculi; *togatorum* enim causa multa feci.

(*b*) Explain the allusions in—

(i) Davus sum non Œdipus.

(ii) Usque adeo fugitant [cornices], non iras Palladis acres, Pervigilii causa, Graium ut cecinere poetæ.

(iii) Non vidit Agricola obsessam curiam et clausum armis senatum et eadem strage tot consularium cædes, tot nobilissimarum feminarum exsilia et fugas.

VIII. The following phrases from your texts are not unfrequently quoted in English writings. State (i) the connection in which they occur in your authors, and (ii) their general proverbial signification:—

(i) Amantium iræ, redintegratio amoris.

(ii) Ne quid nimis.

(iii) Hinc illæ lacrimæ.

(iv) Omnia serviliter pro dominatione.

IX. (*a*) State, and briefly criticise, the theories put forward by Lucretius to explain the rise and fall of the Nile.

(*b*) Illustrate from Tacitus the position and power of the Prætorian Guard under the early empire.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

LATIN: TRANSLATION.

I. Translate into English:—

(i) Nunc tamen illa modis quibus inritata repente
Flamma foras vastis Ætnæ fornacibus efflet,
Expediam. Primum totius subcava montis
Est natura, fere silicum suffulta cavernis.
Omnibus est porro in speluncis ventus et aer;
Ventus enim fit, ubi est agitando percitus aer.
Hic ubi percaluit, calefecitque omnia circum
Saxa furens, qua contingit, terramque, et ab ollis
Excussit calidum flammis velocibus ignem,
Tollit se ac rectis ita faucibus cicit alte.

(ii) Multaque præterea mortis tum signa dabantur,
Perturbata animi mens in mœrore metuque;
Triste supercilium, furiosus vultus et acer,
Sollicitæ porro plenæque sonoribus aures,

Creber spiritus, aut ingens raroque coortus,
Sudorisque madens per collum splendidus umor,
Tenvia sputa minuta, croci contacta colore,
Salsaque, per fauces raucas vix edita tussi.

(iii) MY. Haud vereor, si in te solo sit situm;
Sed vim ut queas ferre. PA. Adeon' me ignavum putas?
Adeon' porro ingratum, aut inhumanum aut ferum,
Ut neque me consuetudo, neque amor, neque pudor
Commoveat, neque commoneat, ut servem fidem?
MY. Unum hoc scio, meritam esse ut memor esses sui.
PA. Memor essem? O Mysis, Mysis, etiam nunc mihi
Scripta illa dicta sunt in animo Chrysidis
De Glycerio. Jam ferme moriens me vocat:
Accessi: vos semotæ: nos soli: incipit:
Mi Pamphile, hujus formam atque ætatem vides,
Nec clam te est quam illi utræque res inutiles
Et ad pudicitiam et ad tutandam rem sient.

(iv) PA. Mi pater!
SI. Quid mi pater? Quasi tu hujus indigeas patris.
Domus, uxor, liberi inventi invito patre:
Adducti qui illam civem hinc dicant: viceris.
PA. Pater, licetne pauca? SI. Quid dices mihi?
CH. Tamen, Simo, audi. SI. Ego audiam? Quid audiam,
Chreme? CH. Attamen dicat, sine. SI. Age, dicat sino.

(v) Ac primo congressu eminus certabatur, simulque constantia, simul arte Britanni ingentibus gladiis et brevibus cetris missilia nostrorum vitare vel excutere, atque ipsi magnam vim telorum superfundere, donec Agricola Batavorum cohortes ac Tungrorum duas cohortatus est, ut rem ad mucrones ac manus adducerent.

(vi) Postera die, velut capta urbe, clausæ domus, rarus per vias populus, mœsta plebs, dejecti in terram militum vultus, ac plus tristitiæ quam pœnitentiæ. Manipulatim allocuti sunt Licinius Proculus et Plotius Firmus præfecti; ex suo quisque ingenio mitius aut horridius. Finis sermonis in eo, ut quina millia nummum

singulis militibus numerarentur. Tum Otho ingredi castra ausus: atque illum tribuni centurionesque circumsistunt, abjectis militiæ insignibus, otium et salutem flagitantes.

(vii) Jam vero censores quemadmodum in Sicilia, isto prætore, creati sint, operæ pretium est cognoscere. Ille enim est magistratus apud Siculos, qui diligentissime mandatur a populo, propter hanc causam, quod omnes Siculi ex censu quotannis tributa conferunt: in censu habendo potestas omnis æstimationis habendæ summæque faciendæ censori permittitur. Itaque et populus, cui maximam fidem suarum rerum habeat, maxima cura deligit; et propter magnitudinem potestatis hic magistratus a populo summa ambitione contenditur.

(viii) Aspendum, vetus oppidum et nobile in Pamphylia scitis esse, plenissimum signorum optimorum. Non dicam illinc hoc signum ablatum esse et illud: hoc dico, nullum te Aspendi signum, Verres, reliquisse; omnia ex fanis, ex locis publicis, palam, spectantibus omnibus, plaustris evecta exportataque esse.

(ix) Deliberas mecum quemadmodum pecunia quam municipibus nostris in epulum optulisti post te quoque salva sit. Honesta consultatio, non expedita sententia. Numeres reipublicæ summam? Verendum est, ne dilabatur. Des agros? Ut publici negligentur. Equidem nihil commodius invenio quam quod ipse feci. Nam pro quingentis millibus nummum, quæ in alimenta ingenuorum ingenuarumque promiseram, agrum ex meis longe pluris actori publico mancipavi: eundem vectigali imposito recepi, tricena millia annua daturus. Per hoc enim et reipublicæ sors in tuto nec reditus incertus, et ager ipse propter id, quod vectigal largo supercurrit, semper dominum, a quo exerceatur, inveniet.

II Translate into Latin:—

Epictetus makes use of a kind of allusion which is very beautiful and wonderfully proper to incline us to be satisfied with the post in which Providence has placed us. We are here, says he, as in a theatre, where every one has a part allotted to him. The great duty

which lies upon a man is to act his part in perfection. We may, indeed, say that our part does not suit us and that we could act another better. But this, says the philosopher, is not our business. All that we are concerned in is to excel in the part which is given us. The part that was acted by this philosopher himself was a very indifferent one; for he lived and died a slave.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

PERSIAN: TEXT-BOOKS AND GRAMMAR.

I. Give a short تذكره of Moulāna Rumī.

II Name the peculiarities in the style of the Tārīkh-i-Nādirī.

III. (1) When may the الف ممدوده of آن be changed into دال and when into الف مقصوره

(2) When may the الف of این be dropped, and when changed into دال

IV. When two words are joined, and the final letter of one and the initial letter of the other are quiescent (ساكن) how is the compound word formed? Give examples.

V. When جز - بهر - بنابر - براي govern nouns in the possessive case, what are they called?

VI. After the following words what verbs are understood:—

آب آب - رحمي - دشنامي - مژده (باضافت)

نويدي - مژده (بي إضافت) *

VII. Re-write the following in colloquial Persian:—

من خود ميروم - تو خود بگو - ماخود رفتيم - شما خود رويد - زيد خود چنين گويد - ياران خود آمدند *

VIII. Re-write the following in a simple style:—

(1) سر عسكر كه طائر رنگش در هواي خيال (1)

معارضه از اشیانهٔ عارض مي پرند بجناحين باد بروت در قلعهٔ قاف بلند پروازي قرار گرفته *

(۲) خيل سرما كرهٔ زمهرير را گرم سير شمرده به ئيلاق آن مكان رخت نزول كشيده *

(۳) از شعشعهٔ لباس و خفتان با زربفت پوش آفتاب همدوش و همسر شدند *

(۴) همين كه جيغهٔ زمرد نگار همايون مشهود نظر افعي خصال گشت ديدهٔ اقبال را كور و چراغ زندگي را به نور ديده دانست كه توسن بختش پي و مرحلهٔ عمرش طي شده اين المفر گوبان شبد يز گريزرا بمهميز تيز انگيز داده *

(2) * اي ضياءالحق حسام الدين بيار *
* اين سوم دفتر كه سنت شد سه بار *
* هر زمان نزعي است خرد جانت را *
* بنگر اندر نزع جان ايمانت را *
* قول پيغمبر قبوله يفرض *
* ان تما رضتم لدينا تمر ضوا *
* جذب اجزا روح را تعليم كرد *
* چون نداند جذب اشيا شاه فرد *

IX. Relate any story (briefly) connected with any one of the following persons :—

اصحاب ضروان - موسي و فرعون - خواندن ضرير قران را - دعوت نوح پسر را - دقوقي *

X. Give the English meaning of—

(1) استن حنانه - قارغان - حري - حلم نائم -

عثار - مناص - خام ریش - خافقین - تیپ لشکر - سست ربش - قوي ئیل - کوچ - سنگر - توشقان ئیل - ناظر بیوتات - جوائز *

(۱) اسب من لکه رفت (۲) اجزاي (2) سفارت ایران بملکه معرفي شدند (۳) او سنگین حرف مي زند (۴) بر وقت خاطر نمي آید (۵) با فارسي سرتان مي شود *

XI. Name the figures of speech in the following :—

(ا) * سرّ حق از محفل مستان طلب *
* نه از دل شیخ از دل مستان طلب *

(ب) * حلق بخشید او عصاي عدل را *
* خورد او چندان عصاي و حبل را *

(ج) کند اوران کید آور مانند غضب غضبناک از دم غضب دم غضب می افشاندند - بهادران جنگجوي از تواتر بواتر و نواتر نواتر نوابر مي افروختند *

XII. Distinguish between the meanings of the grammatical terms in each group :

تبلیغ و اغراق و غلو - لف و نشر و تقسیم - عکس و قلب - ردیف و قافیه - بلیغ و فصیح *

XIII. What prepositions can be used with following verbs. Give examples :—

پرسیدن - خواستن - گفتن - دو چار شدن - بحث کردن - سروکار داشتن - شستن - نوشتن *

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

PERSIAN: TRANSLATION.

I. Translate into English:

(1) ازور دیگر کوتبهٔ مسعود وارد سر پل گشته فرمان پذیران باشارهٔ والا بساختن پل پرداخته عبور و فراز کوه غار پناه را مقر کوکب منصور ساختند - و در انجا عساکر فیروزي قرین را منشعب ساخته دسته دسته بجستجوي احوال آن طائفه بقلل جبال آسمان تمثال تعین فرمودند - و مامورین جمعي از یشان را درگوشه و کنار و کریوه و مغاک بخاک هلاک افکنده بقدر سه هزار خانوار بقید اسار گرفتار نمودند - و از ان مکان بمحل موسوم بدارد را متوجه گشته فوجي را بگوش مالي آنجا گماشته از انجا بگذرگاه تلات روي توجه آوردند - و از ان مکان فوجی را باقشون الوار بجبال سمت زند و میمونند تا حدود لرستان مامور ساخته باز عطف عنان بجانب کوه سالم فرموده بسه منزل وارد محل کرد بیشه شدند - و بانتظام ضابطهٔ مامورین آن حدود پرداخته بنوار را مطلع ماهچهٔ رایت خورشید انوار ساخته از انجا بدو منزل وارد للکر گشتند *

(2) * بشنو اکنون قصهٔ آن رهروان *
* که ندارند اعتراضي در جهان *
* زاولیا اهل دعا خود دیگراند *
* که همي دوزند وگاهي مي درند *
* قوم دیگر مي شناسم زاولیا *
* که دهان شان بسته باشد از دعا *

* از رضا که هست رام آن کرام *
* جستن دفع قضا شان شد حرام *
* در قضا ذوق همین بینند خاص *
* کفر شان آید طلب کردن خلاص *
* حسن ظني بر دل ایشان کشود *
* که نپوشند از عمي جامه کبود *
* هرچه آید پیش ایشان خوش بود *
* آب حیوان گردد ار آتش بود *
* زهر در حلقوم شان شکر بود *
* سنگ اندر راه شان گوهر بود *
* جملگي یکسان بود شان نیک و بد *
* ازچه باشد این ز حسن ظن خود *
* کفر باشد نزد شان کردن دعا *
* کاي آله از ما بگردان این قضا *
* در نرد محبت همه جا خصل حکست * (3)
* صد مهرهٔ داغ هر طرف تیز تکست *
* از نقش زباده داو نتوان بردن *
* نقشي که توان برد بان نقش یک ست *

هر تنک ظرف را بادهٔ توحید نچشانند - و هر کم (4) حوصله را زمزمهٔ تحقیق نشنوانند - گوئیان هستي را به پنجهٔ سین نیستي باید درید - و رخسار تعلق را بناخن راي تجرد باید خراشید - کشیدن بار لباس از سبکروحان نمي آید - و تقید وضع رسمي آزادگان را نمي شاید - کلاه چار ترک

عنصري بر سر كافي است - و پوست چل خورش ديدهٔ بشري دربروافي - در قيد خرگاه بودن از گاوي است و در بند گاو تكيه افتادن از خري - هوا پرستي خاك بر سر كردن است - و سير عالم آب جا در آتش ساختن - حسن بتان بادی ست رنگين - و زلف خوبان هوائي است مشكين - نه دل به ثبات آن توان داد - و نه بدام بقاي آن مي توان افتاد *

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 12 NOON.

URDU: TEXT-BOOKS AND GRAMMAR, &c.

I. مرقوم الذيل شاعرون سے كسي ايك كا تذكره مجملاً رقم كرو *

گويا - ذوق - ناسخ *

II. (1) ابيات ذيل كي شرح كيجئے *

* تن پرورون كي تيغ زبان سے نه تهي پناه *
* گو درعه تها دراعه نقوش حصير كا *
* ايثار ديكهنا كه عيان هل اتي مين هي *
* مسكين كے بعد ذكر يتيم و يسير كا *
* ازل سے دشمني طاؤس و مار آپس مين ركهتے هين *
* دل پرداغ كو كيون كر هي عشق اس زلف پيچان كا *
* جو شاهد مقصود كا طالب هو بشر *
* دم لے نه تگاپو سے وه هرگز دم بهر *
* كرتا هي درخت آرزو كو سرسبز *
* خون دل و آب چشمهٔ ديده تر *

(2) بتلاؤ که مذکور دوسري بيت مين لفظ يسير
لمين شاعر نے کيا غلطي کيا اؤر بجاے اس کے کونسا
فظ چاهئے *

(3) کسی ايک مصرعے کي تقطيع کرو *

(4) تيسری بيت مين کيا صنعت هي *

(5) پهلي بيت کي ترکيب کرو *

III. الفاظ ذيل کي معني انگريزي مين لکهو *

لهذا - روئيدگي - خوار رعدآسا - آب زلال - کنام -
پهلوتهي کرنا - پيش رفت ليجانا - پيشکش - حيّز امکان
سے باهر هونا - تمازت آفتاب - ملهم غيبي - قضارا - دعوت
فرعوني شروع کرنا - کارد باستخوان و کار بجان پهنچنا -
انتفاع کلي - مستولي هونا *

IV ابيات ماتحت کے قافيون کے عيب کو بتلاؤ
اؤر اس عيب کا اصطلاحي نام لکهو *

* امدّا هي آنسوون کا مري آنکهه سے وه بحر *
* هين جس کے آگے سات سمندر بهي ايک لهر *
* ساق سيمين کو تيري ديکهه کے گوري گوری *
* شمع محفل مين هوي جاني هي تهوڑي تهوڑي *
* لکهديا مجنون کو شير شتر * * کهديا مستسقي سے جافصد کر *

V. انکي تعريف کرو *

علم نحو - علم عروض - علم بديع - استعاره *

VI. تقطیع میں حروف مرقومۃالذیل کے خصوصیات بیان کرو *

ہاي مختفي - الف وصل - واو عطف - دو حرف ساکن *

VII چند قواعد کلیہ مذکر ومونث کي پہچانت کے لکھو *

VIII. اگر کسي فعل کے دو فاعل ہوں اس طرح کہ ایک مذکر رہے اوْر دوسرا مونث یا ایک متکلم ہو دوسرا غائب یا برعکس اسکے تو بتلاؤ کہ فعل کس فاعل کي مطابقت کریگا *

IX. حروف ذیل کو شعرا کن اعضا سے استعارہ کرتے ہیں *

الف - س - ص - ل - م - ن *

WEDNESDAY, 21ST JANUARY, 12 NOON TO 2 P.M.

URDU: TRANSLATION.

I. Translate into Urdu :—

It is noble to seek Truth, and it is beautiful to find it. It is the ancient feeling of the human heart, that knowledge is better than riches; and it is deeply and sacredly true. To mark the course of human passions as they have flowed on in the ages that are past; to see why nations have risen, and why they have fallen; to speak of heat, and light, and the winds; to know what man has discovered in the heavens above and in the earth beneath; to hear the chemist unfold the marvellous properties that the Creator has locked up in a speck of earth; to be told that there are worlds so distant from our own, that the quickness of light, travelling since the world's creation, has never yet reached us: it is worthwhile in the days of our youth to strive hard for this great discipline. A life of knowledge is not often a life of injury and crime. Whom does such a man oppress? With whose happiness does he interfere? Whom does his

ambition destroy? and does his fraud deceive? In the pursuit of science he injures no man, and in the acquisition he does good to all. Therefore, if any young man has embarked his life in the pursuit of knowledge, let him go on without doubting or fearing the event. She will bring him out at last into the light of day, and exhibit him to the world comprehensive in acquirements, fertile in resources, rich in imagination, strong in reasoning, prudent and powerful above his fellows in all the relations and in all the offices of life.

II, * مرقوم الذيل نثر و نظم کا ترجمه انگريزي مين کرديجئے *

(1) * ترے کوچے کو وہ بيمار غم دارالشفا سمجھے *
اجل کو جو طبيب اوْر مرگ کو اپنی دوا سمجھے *
* نگه کيا اوْر مژه کيا ہم تو دونون کو بلا سمجھے *
* اسے تير قضا اوسکو پر تير قضا سمجھے *
* ستم کو ہم کرم سمجھے جفا کو ہم وفا سمجھے *
* اوْراس پر بھي نسمجھے وہ تو اوس بت سے خدا سمجھے *
* ندي رخصت نظر کو ميري جانب کيون تغافل سے *
* اسے بھي آپ کيا ميرا ہي بخت نا رسا سمجھے *
* حساب اصلا نپوچھے مجھ سے ميرے دل کے زخمون کا *
* حساب دوستان در دل اگر وُہ دلربا سمجھے *
* سمجھ ہي مين نہين آتي ہي کوئي بات ذوق اسکي *
* کوئي جانے تو کيا جانے کوئي سمجھے تو کيا سمجھے *

(2) شنزبه نے کہا که ايک بط نے ايک شب پاني مين قرص ماه ديکھا سمجھي که ماہي ہي اِراده کيا که اُسے شکار کرے کچھه نبايا - چند باراسي طرح پر آزمايش کي جب ديکھا که حاصل اُس سے کچھه نہين ہي کناره کيا -

اؤر اُس کے بعد عہد کیا کہ شکار ماهي کبهي نکرونگي - اؤر دوسري رات اگر ماهي بهي دیکهتي تهي تو روشنائي ماه کی جان کر قصد اُس کا نکرني تهي - ثمره اس تجربۂ لا حاصل کا یہہ ہوا کہ همیشہ بهوکي رهتي تهي - اگر میري طرف سے کان شیر کے بهرے هین - اؤر اس کے دل مین اس کي کراهت آچکي هي اؤر موجب اس کا وهي اظهار غیرون کا هي تو غالب هي کہ پهر صفائی دشوار هو *

(3) * چهره هوا هی غیرت گل آفتاب سے *
* خوشبو مین هي زیاده پسینا گلاب سے *
* اُس روي آتشین نے دیا هي یہہ داغ دل *
* روشن هوا چراغ مرا آفتاب سے *
* هم بوسہ مانگتے هین وُہ کچهہ بولتے نهین *
* محروم هي سوال همارا جواب سے *
* جینا فراق کا نهین هرگز حساب مین *
* مدت هوئي کہ مرچکے هین هم حساب سے *
* کرتے تهے سیر مصحف رخ زلف مین پهنسے *
* دشت خطا مین جا پڑے راه صواب سے *

(4) مال کی بخشش اؤر اس کے خرچ کرنے مین

حد اعتدال کو ملحوظ رکهہ - سبیل اُس کي اِس طور سے هی کہ زیاده خرچ اؤر بخل سے بچاوے - اؤر دکهانے اؤر فخر کرنے کے لئے خرچ نکرے - اؤر چاهئے کہ خرچ آمدني سے تهوڑا هو اؤر ایام سختی کا لحاظ رکهہ جیسے قحط سالي مفلسي

حالت بیماری کے هین - اور مال و اموال کے جمع کرنے
مین مناسب یہہ هي کہ کچھہ نقد هو اور کچھہ جنس
اثاث البیت کي قسم سے اور ملک جیسے باغ مواشي وغیرہ
هی اس واسطے کہ اگر کسي مین نقصان آوے تو دوسرے سے
جبر اس کا هو سکے *

WEDNESDAY, 21ST JANUARY, 10 A.M TO 12 NOON.

TAMIL: TEXT-BOOKS AND GRAMMAR.

I (a) பள்ளி அடைப்படலம் என்பதற்குப் பொருளென்ன? இதில் இராமனைக் காட்டுக்கனுப்பின காரியத்தில் கோசலாதேவி பரதன்மீது கொண்ட சந்தேகம் நீங்கும்பொருட்டு இவை என்னென்ன பிரதிக்கினைகள் செய்ததாகச் சொல்லப்பட்டிருக்கின்றது?

(b) நீங்கள் படித்த காண்டத்தில் சூரியாஸ்தமய காலத்தைப்பற்றியாவது அல்லது அரசனில்லாத ராஜ்யத்தைப்பற்றியாவது கம்பன் வர்ணித்ததைப் பொருள் தெளிவாகச் செம்பாகமாய் எழுதுக.

II இதனடியில்வரும் இரண்டு செய்யுட்கும் பொழிப்புரை எழுதி முன்பின் சம்பந்தம் கூறுக:—

(1) பாதங்கள் பெயர்தொறும்பாருமேருவும்
போதங்கொணெடுந்தனிப்பொருவில் கூம்பொடு
மாதங்கம்வருகலமறுகிக்கால்பொர
ஓதங்கொள்கடலினின்றுலைவபோன்றவே.

(2) புண்ணிய நறுநெயிற் பொருவில் காலமாந
திண்ணிய திரியினில் விதியென் றீயினில்
எண்ணிய விளக்கவை யிரண்டு மெஞ்சினால்
அண்ணலே யவிவதற் கையமாவதோ.

(a) இச்செய்யுட்கள் எவ்வகை விருத்தம்? இவ்வகை விருத்தத்தின் அடிகள் என்ன பெயா பெறும்? முதற்பாட்டில் (1) இரண்டாமடிக்குச் சீர் பிரித்துக் காட்டுக.

(b) "பாருமேருவும்":—இச்சொற்றொடரை பாருமேரும் என்று புணர்ச்சி விதிப்படி எழுதலாமா? நீர் எழுதும் விடைக்கு நியாயமும் கூறுக. உம்—என்பது செவ்வெண்ணில் வருதற்கும், முற்றும்மையாக வருவதற்கும் உதாரணங்களெழுதுக.

(c) "பாருமேருவும்" சலிப்பது எக்காலத்தில் உள்ளதென்று புராணங்களிற் கூறியிருக்கின்றது? மேற்செய்யுளில் எப்பொருளைக் குறிப்பதற்குப் பிரயோகிக்கபபட்டிருக்கின்றது?

(d) உவமையணியானது பண்பு - தொழில் - பயன் - என்னும் மூன்றின் காரணமாக வருமென்னும் விதியை உதாரணங்களால் விளக்கிக்காட்டுக. முதற் செய்யுளிற் கூறினது எதனுள் அடங்கும்?

(e) "போதங்கொள்":—அசேதனமான மரக்கலத்திற்குப் போதங்கொள் என்று கூறினது குறிப்பு வெளிப்படையென்னும் இரண்டினுள் எது?—அதனுள் கொள்ளும் பொருள் யாது?

(f) "கால்பொர":—இதற்கு அர்த்தமென்ன? செய்யவென்னும் வாய்பாட்டு வினையெச்சம் எந்தெந்தக்காலத்தில் வரும்? இங்கு எப்படி வந்தது? மற்றிரண்டு காலங்களில் வருவது என்ன பொருள்

வேறுபாடுபற்றி ? இவைகட்கு முறையே உதாரண வாக்கியங்கள் எழுதிக்காட்டுக.

(g) வினைமுற்று பெயராக வந்தால் என்னென்ன பொருள்படவரும் ? முதற் செய்யுளில் "உலைவ" என்பது எந்தப்பொருளில் வந்தது ?

(h) "போன்றவே" :—இது பன்மையில் வருவானேன் ?

(i) இரண்டாம் (2) செய்யுளில் வரும் அணி என்ன ?

(j) இச்செய்யுளில் நான்கிடத்தில் வரும் "இல்", எந்தப்பொருளைக் குறிக்கின்றது ? ஈற்றடியில் "ஆவதோ" என்பதில் ஓகாரத்திற்குப் பொருள் என்ன ? "அவன் நன்னெறி செல்லானோ" என்பதில் ஓகாரம் என்ன பொருளைத் தருகின்றது ?

(k) மேலிரண்டு செய்யுட்களில் வினைத்தொகை ஏதாவதிருந்தால் எடுத்துக்காட்டுக. வினைத்தொகை எந்தெந்தப் பொருட் பெயரைக்கொண்டு முடியும் ? உதாரணங்களோடு எழுதுக.

III. (1) Look, darling, on this noble hill,
Which sweet birds with their music fill;
Tinged with a thousand metal dyes,
His lofty summits kiss the skies.

இதுபோன்ற கருத்துள்ளதாய் இராமாயணத்தில் நீர் வாசித்த பாட்டையாவது அதன்தாற்பரியத்தையாவது பூரணமாய் எழுதுக.

(2) பினவருபவைகளுக்கு அர்த்தமெழுதி முன்பின சம்பந்தங் கூறுக :—

(a) நஞ்சினை நுகரென நடுங்குவாரினும்
அஞ்சின னயர்ந்தனன்.

(b) சொல்லொடுஞ் சினத்தொடு முணாவ சோர்தர
வில்லொடுங் கண்ணநீர் நிலத்து வீழவே.

(c) ... ... கண்ணெனும்
புண்டரீகம்பொழி புனலவன் சடா
மண்டல நிறைந்துபோய் வழிந்து சோ
ரவே.

(3) "அனபுளவினிநாமோ னாவர்களுளரானேம்", "வடதிசை வருமந்நா ணின்னுழை வரு கினறேன்" :—இவ்விரண்டும் எப்பொழுது யாருக்கு யார்சொன்ன வாக்கியங்கள் ? கருததென்ன ?

(4) "ஆயிரமிராமர் நின்கேளாவரோ" :—இப்படி யார்யாரை எந்த ஏதுவாற் சிலாகித்தனர் ?

IV. அயோத்தி - தயரதன் - கைகேசி - இலக்ஷ்மணன - சுமந்திரன் - காகுஸ்தன :—இபபெயர்களுக் குக் காரணம் விரித்தெழுதுக.

V. நாயனார் நாமங்கள் யாவை ?

VI. (a) நாயனார் அறத்தின் இலக்கணங்கூறிய குறளை எழுதுக.

(b) அறவாழி யந்தணன் றாள்சேர்ந்தார்க் கல்லாற பிறவாழி நீத்த லரிது.

இதிற் பிற என்பதை முதனிலைத் தொழிற பெய ராகக் கொண்டு, பிறவாழி என்பதறகுச சனனசாகரமெனறு அர்த்தம்பண்ணலாமா ? எழுதும் விடைக்கு நியாயமுங் காட்டுக.

VII. (a) விண்ணம் போழும்வாள் வெயிற்கு வெமபுகா
ணண்ணல் யானையா ஞட லாலிளைத்
துண்ணு நீர்நசைஇ யொருத வத்திஞே
ணண்ணு சாலைவாய் நடத்த னண்ணினன.

இதற்கு பதவுரை எழுதி, வாள், அண்ணல், ஆடல், வாய் என்பனவற்றிற்கு விசேடவுரையும் எழுதுக.

நசைஇ என்பது என்ன அளபெடை ?

(b) உலகத்தோ டொட்ட வொழுகல் பலகறறுங்
கல்லா ரறிவிலா தார்.

இதனைச் செய்யுணடையை ஒழித்துச், சந்தி பிரிததும் தொகைகளை விரித்தும், கத்தியரூபமாக எழுதுக.

உலகத்தோ டொட்ட என்பதற்கு இரண்டு தாற பரியமுண்டு ; அவையாவை ?

VIII. பச்சிளம் புல்லுணப் பசுக்கண் மேய்த்தது
நச்சர வுச்சியி னடங்கு யின்றது
மச்சமுற் றிடவரு மடவித் தீயினை
யிச்சைசெ யனையென வெடுத்து ஞண்டதும்

இதில் முதலடியிலும் ஈற்றடியிலுமுள்ள ஒவவொரு சந்திகளும் புணர்ச்சி விதி எழுதுக.

IX. (a) ஐயதார்ச்சனமேசய ஞதியா.
விரத்திமிக்க மேதாதியவுசயன்.
தொழுதியங் கலவமேய துஞ்சலில் வறுங்கண்.
கழைசுளி களிநல்யானைக் காவலன.
இவைகளின் அர்த்தம் என்ன ?

(b) இறுதிவாக்கியத்திற ககரம் மிகாது யானை காவலனென்றால் என்ன அர்த்தமாகும் ?

X. சிலைவ ணக்கிவெஞ் சினவ யப்பெரும
புலிது ரதினன புயல்கி ழித்த பொற்

குலவ ரைத்தடங் குடுமி கொண்டசேல்
வலனு யர்த்தவாள் வழுதி மானவே.

இதிலுள்ள உவமான உவமேயங்களை விரித்துக் காட்டுக.

பொற் குலவரை என்பதன் அர்த்தமென்ன ?

WEDNESDAY, 21ST JANUARY, 12 NOON TO 2 P.M.

TAMIL: TRANSLATION.

I. Translate into Tamil—[See Urdu Translation paper, p. clxxvi].

II. Translate into English—

(1) (a) இல்லதெ னில்லவண் மாண்பாரு ளுளளதெ னில்லவண் மாணுக்கடை.

(b) அறன்கடை நின்றாரு ளெல்லாம் பிறன்கடை நின்றாரிற் பேதையாரில்.

(c) உதவி வரைத்தன் றுதவியுதவி செயப்பட்டார் சால்பின் வரைத்து.

(2) இழையுமாரமு மிடையு மின்னிடக்
குழையு மாமலர்க் கொம்பனார்கடாம்
தழையின் முண்டகந் தழுவுகானிடை
முழையின் மஞ்ஞையோ லெரியின் மூழ்கினார்.

(3) கணந்திகழ் மருத்தென்போர்கள் கவின்பெறு வலி தந்தாள்வர்

வணங்கிடின் வருணனல்கும் வளர்புகழ் பிதிர்க ளென்போர்

குணம்பெறு புதல்வர்நாளுங் குறைவற வருள்வா வீரம்

இணங்குருத்திரர் தாமீவ ரியக்கர்காத் தருளு வாரால்.

(4) சிலந்திப்பூச்சியானது அதன் நூல்களை நூற்று மறுபடியும் சேர்ப்பதுபோலவும், பூண்டுகள் பூமியின்மீது முளைப்பதுபோலவும், ஜீவப் பிராணிகள்பேரில் உரோமங்கள் முளைப்பது போலவும், இப்பிரபஞ்சம் அழியாத சுபாவத்தி லிருந்துண்டாகின்றது. அதனிலிருந்து சரீர முண்டாயிருக்கின்றது. அதிலிருந்து கிரம வரிசைப்பிரகாரம் உயிர்ப்பு, அநதக்கரணம், உல கங்கள், நல்வினைகளால் உண்டாகிற அழிவின் மை, உண்டாகின்றன.

III. Render the following into appropriate Tamil :—

(a) Every country has its own proverbs. A proverb well introduced is decisive of an argument in this country as a bet is in England.

(b) The tortoise in the right road will beat a racer in the wrong. Therefore it matters not though a youth be slow, if he be but diligent.

(c) His father left him a little fortune; and while it lasted, he had no end of friends. Money seems to have melted away in his hands like snow in summer.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 12 NOON.

TELUGU: TEXT-BOOKS AND GRAMMAR.

I. (1) ఆవరప్రాకారకు బంతభాగ వరి భాగజ్ఞార్క బింబం బులౌ

రవయోజాత భవాండపుంఖిత తమోరక్షిః పరిధ్వస్తది

ష్టపతంగాన్వయరాట్తురంగ చరమక్ష్మాధ్రోదయగ్రా వదో

రువరిభ్రాజిత శంఖచక్రములు నానొక్కంటఁగన్న

న్నైరిన్.

(2) కర్కశుఁడంటకోర్వ కుదకంబులు వాఁపతిగూర్చినట్లు
నయ్యార్కుఁడుఁ దానుగూర్చి మఱియా సలిలాధిప
చిహ్నవాహతం
బేర్కలుగంగగాతఁడెలమిన్నకరస్థితిఁగన్ననీర్వ్యఁదాఁ
గర్కటకస్థుఁడయ్యెననఁ గర్కటకస్థితిఁగాంచెనత్త
ఱిన్.

(3) తటిదుత్సారితఫణభృ
త్పటలినిరన్నంబులయ్యుఁదక్కవుబర్హు
ల్నటనమతిహర్షహేతూ
త్కటలాభంబిడునె మదిక్షుధన్నిర్వట్టున్.

(a) పై పద్యముల తాత్పర్యమును విశదీకరించి వ్రాయునది

(b) రెండవపద్యమందలి యలంకారములను సలక్షణముగఁ దెల్పునది.

(c) ప్రాక్, రాట్, పయిస్, క్షుత్, వీనికిఁ దెనుఁగునఁ బ్రధమైకవచనరూపములవ్రాసి తత్సమ హలంతశబ్దములు సంస్కృతమునందుండి తెనుఁగునవచ్చునపుడు పొందురూపభేదములగురించిన సామాన్యలక్షణములఁ గొన్నిఁ దెల్పునది.

(d) అబ్జము, క్రోధము, నిగన్నంబు, బర్హి. ఈ పదములకు సమాసవృత్తి దెల్పునది.

(e) "పరిధ్వస్త". ఇచటఁ బ్రయోగవిశేషమును దెల్పుము

(f) "ఎడిన్" ఇది ఏ యే యర్థకములయందుఁ బ్రయోగింపఁబడు ?

II (1) స్యందనస్థితబిడౌ జఃక్షత్త్రజాడ్యకృజ్జంఘామరుద్గరు
జ్ఘాత్కృతములు

క్రవ్యాశిరాడ్గాత్ర కనదస్సగ్గాహన స్ఫుటశల్యకావ్య
భుక్పాత్కృతములు

యోధవర్మితహృత్పు టోత్క్రాంతనిజపాత సాలాత్మ
కృతముహుష్ఠాత్కృతములు

పతితోగ్రదక్షిణక బంధభారభృశార్తి భగ్నభోగఫణీంద్ర
పూత్కృతములు

క్రాంతరధ్వనిరంతరచ్ఛాయదములు దివ్యతావకకా
ర్మకోత్ప్రేరితములు

కలుషములడంచుఁగాతలంకాపురాంగ ణాంబరచల
త్కలంబ కదంబకములు.

(2) తుములమైవచ్చు తచ్చమూ సామజంబులంజూచి
యేచినవెఱం

దమయెక్కిరింతలెత్తికొని వాగెలిరుగేలంగుదియబట్టిన
నిలువ

కయ్యాత్సవంబీక్షింపవచ్చిన ప్రజలం ద్రొక్కుచు
బోవ.

వీనికి దండాన్వయముగ నర్థముగ్రాయనది.

III. వనపాళిన్వనియించి నిత్యము బిసవ్రాతంబుభక్షించిన
త్వనిరూఢింగవి వర్యతంబరగుచుఁ బ్రహ్మర్చి తాత్మత్వపా
వనచారంబులనుండు మాకునిపుడీ వామానుషంగిత్వమొ
వ్వనెయంచున్వెసఁబాఱెహంస విసరంబుల్ స్ఫీసరఃక్రీ
డలఁ.

ఇందలి శ్లేషార్థమును విశదపరచి తాత్పర్యము గ్రాయ
నది.

IV. (a) ఇట్చురకుల నాయకధ్వజనిషంగము.

(b) నీలనీలాలక జాలంబులందమా మోముచామరయందు ముసరికొనఁగ.

(c) పవిధారాపతనంబుఁగైకొనని యప్పాలస్త్యమైసప్తధాతువులందూఱఁ.

మొదటి రెంటియందలి యర్థవిశేషములనువ్రాసి మూడవదానియందు "పవిధారాపతనంబుగైకొనని" అనుచో కథాసందర్భమును దెలిపి 'సప్తధాతువుల' నిరూపించునది.

V. చటులకృపీటసంస్థితరసాస్థలిప్రీలకయుండగారయి
చ్చుటకును బోలెశంఖ మణిశుక్తికదంబమునుగ్గగావిశం
కటచరమాంగమంథగిరి ఘట్టనచేసి ఘరట్టమైకృపా
పటిమజగంబుఁబ్రోచు ప్రాక్కమతంబు నినున్భజిం
చెదన్.

ఈ మనుచరిత్రయందలి పద్యమునకు సరియైనపద్యమును నా ముక్తమాల్యదయందుండి వ్రాయునది.

VI ఆంధ్రసాని పెద్దనతోఁగూడఁ గృష్ణదేవరాయుల వారి సభయందుండిన ముఖ్యకవులను నలుగురిని బేర్కొని వారు రచించిన యొకటిరెండు గ్రంథముల నెడివి వానిని గురించి మీ యభిప్రాయము దెల్పుము.

VII. సమసో మసోరంజనమునందలికథ నెందుండియెత్తి వ్రాసియుండవచ్చును?

WEDNESDAY, 21ST JANUARY, 12 NOON TO 2 P.M.

TELUGU: TRANSLATION.

I. Translate into Telugu—[See Urdu Translation paper, p. clxxvi].

II. Translate into English—

(1) నాచిత్తంబు నిరంతరంబును పురాణగ్రంథశాస్త్రక్రియా।
వైచిత్రిఁ విలసిల్లుచున్నయది భవ్యజ్ఞాన సంసిద్ధియఁ ।
వాచామాధురియఁ బహు ప్రతిభయఁ వైదగ్ధ్యముం
బెంపుతో ।
నాచిత్యంబుగ నాకునిమ్మని పులస్త్యబ్రహ్మఁ బ్రార్థించితిఁ॥

(2) కాలిన మోటువంటి కొఱగానిశరీరము పల్లవెండ్రుకల్ ।
గ్రాలెడు బూచిగడ్డమును ఖల్వటకంబును నీ రలుంగునఁ।
బేలగు మూఢవాక్యములుబీఱనరంబులతోడికుక్షియఁ।
దూలెడువక్రదంతముల నోరునుగల్గియొకండుపుట్టినఁ॥

(3) అందనిపంటికేమిటికి నక్షునిగిడ్డెదు అవిష్టిఁడున్నయా ।
కందువచందమామగుటకల్ వినుమీపని గట్టిపెట్టినా ।
డెందములోనియమ్మలిక డిందుపడంజను దెమ్ముపోదనిం ।
పొందసమస్తభోగములఁ బొందెడుతండ్రికి వేడ్కనేయ
నఁ॥

(4) లలితపతివ్రతాతిలకంబు వంశాభిజాత్యతద్భార్యమస్స
హదరిద్ర ।
పీడచేగడు నెచ్చిపెదవులు దడుపుచు శిశువులాకటిచిచ్చు
చేఁగృశించి ।
మలమలచూడుచు మానసంబెఱిగియంగఁ బ్రైడోరము మా
కుఁ బెట్టుమరుదు ।

బత్రభాజనధృత పాణుఁడై తనుఁజేరి వేడ వీనులుచురఁ
జూడినట్లు ।

నైనసొకనాడువగచి నిజాధినాథుఁ ।
జేరియిట్లనిపలికెనో జీవితేశ ।
తట్టుముట్టాడు నిట్టి పేదరికమిట్లు ।
నెంప దీనికుపాయ మూహింపవైతి ॥

WEDNESDAY, 21ST JANUARY, 10 A M TO 12 NOON.

KANARESE. TEXT-BOOKS AND GRAMMAR

I (a) నీవు ఈ పరిక్షెగాగి ఓదిద కన్నడ పుస్తకగళ కర్తరు యారు ?

ఇవర చరిత్రెయన్ను ఇవరు మాడిద ఇతర గ్రంథగళన్ను నిమగె తిళిదమట్టిగె బరెయిరి.

(b) కన్నడదల్లి ఉత్తమగ్రంథ యావదు ? ఇదన్ను యారు మాడిదరు ? యావాగ ? కన్నడ గ్రంథగళు హిబ్బాగి మూరుకాలగళల్లి బరెయల్పట్టివెందు తిళియబరుత్తదె. ఇవు యావయావ కాలగళల్లి ? యావ దేశగళల్లి మత్తు యావ మతదవరిందద ? (ఈ ప్రశ్నెగళిగె ప్రత్యుత్తరగళు కారణ సహితగళాగిరలి.)

II (a) కలావతీ బృహద్రథరు ఒబ్బరన్నొబ్బరు ఉద్యాన వనదల్లి నోడి సంతోషిసిదరు. ఇవర సంతోషగళెయన్ను సంగ్రహవాగి బరెయిరి.

(b) శిద్ధఘుటికె యందరేను ? ఇదు బృహద్రథనిగె హ్యాగె దొరకితు ?

(c) "అస్మాఖీర్భదను ష్ఠేయంగంధర్వైస్తదనుష్ఠితం" ఇ దన్ను యారు హేళిద్దు మత్తు యావ సమయ దల్లి ఎంబువదన్ను వివరవాగి బరెయిరి.

(d) "కాలదేశవనోడి కార్యమం సాధిసలు కుశల రాదవరింగే కాల్దిగెయల పనూనవేను" ఎందు యారు యావ సందర్భదల్లి హేళిదరు?

III. (a) సుధియన్ను పడెయవరె సురరు దుగ్ధాబ్ధియనుకడి యలు మహాకాలకూటవుదయిసిదంతే.

(b) దశశిరను వసుమతీసుతెయ బయసిదరేరది.

(c) కురనివనకెడిగంగినిందురుహిబసుమగ్నేదను.

(d) గిరిశనయా గంగాంబికెయర కలకుర్కుగిదు బందు పోక్కయో.

(e) సోర్కెద చ్ఛిత్కరం సదిదనంధరనంతుళిదంపురాం గజా।

తార్కజరంకనల్దురుపిదంమఖదూటకోరల్దుబందదే॥

వర్కళ నిక్కిదంద్విప మృగారిసురారిగళం పోర ళ్దిత।

క్కర్కశ చర్మమం సులిద నబ్జజనొళ్దలేగొ య నీశ్వరం.

ఇవుగళల్లియ పురాణ రక్షిగళన్ను సంగ్రహవాగి బరెయిరి

IV. (a) అష్టాంగనందదలి మూరు దృష్టియతాళి విష్టర శ్రవ నంతే శక్తిగళ నవదరిసి వృత్రఘ్న నందదలి మూరు కౌణావనరిదు సిద్ధుదయ వర్గగళ పడిదు జ రుహోపాయదలి సమాహితనాగి విద్విషర ని

గ్రహిసి వగాఁశ్రమాచారం బేరియ దోర్దండధరనాగి.

(b) జలంధర మరేంగజప్రి బళతార కేంద్రాగ।
ళ్బలంగెడిసే భంగమంపడెద విఘ్న పంకేజమూ ॥
బలారిగళ కాగమం బయసే వెందుమిమ్మంగమం।
కలానిధి కలాపనిం సవిమే సాల్గుమిందాడిదర్ ॥

(c) కళకుంసీఁశారు జంబూద్వళిక గళికబాలాబ్జబీజాళి ముక్తా।
కళికం పట్వాదపత్రాకుకిపళి కపయోరుట్పరాగారుణశ్రీ।
మిళదుద్యద్వర్ణకం కందళిక రమళచిత్రం ప్రవిష్టార్కరోచి।
జ్వళికం కాసారమొందా రకిరకిరచికం కంతుగెంబంకికోర్కుం ॥

(d) మత్త మారాజ్యదొళ్ శాస్త్రిరత్న శశద శృంగదల్లిమే హొరతు నరర వార్యదొళిల్ల కాశిగ్రామ బలాపయోధరగళన్నుళిదు జనర హృదయ దొళిల్ల కాశ్మీరమదు కామినీజనర మధ్యదొళల్లదల్లి మనుజరొళిల్ల వర్గికె వధూజనర పుబిన్నల్లిమే హొరతు బుధర బుద్ధియొళిల్ల హరియు విద్వేషవెంబువదు హస్తిగళల్లిమే హొరతు నరర చిత్తదొళిల్ల.

ఇవుగళ అర్థవం బరియిరి.

మేలిన గద్యపద్యగళ అలంకారగళన్ను సలక్షణవాగి వివరిసిరి.

V (a) రూపక, శాంతి మత్తు ఉదాత్తాలంకారగళిగె రాజశేఖర విశాసదింద ఉదాహరణెగళం కొడిరి.

(b) భోజరాజ కాళిదాసరన్ను కురితు నిమగేను తిళియువదు? ఇవరు యావాగ బదుకిద్దరు?

(c) 'నవరస' 'అష్టాంగయోగ' ఇవుగళు యావవు? అవుగళ లక్షణవేను?

(d) బేడర కణ్ణప్పన కథెయన్ను సంగ్రహవాగి బరియిరి.

VI శైవ మతస్థరు ముఖ్యవాగి ఐదు లింగగళన్నారాధిసువరు. అవు యావవు? అవుగళెల్లెల్లిరువవు?

VII (a) కృదంత తద్ధితాంతగళందరేను? అవ్యయవెష్టువిధవు? ఉదాహరణెసహిత బరియిరి.

(b) కన్నడ శబ్ద సమాసగళెష్టువిధవు? ఉదాహరణెసహిత బరియిరి.

(c) సతి సప్తమి యందరేను? కన్నడదల్లి అదు హ్యాగె ప్రయోగిసల్పడువదు?

(d) ఛందస్సు, వ్రాస యతిగళన్ను నీవు ఓదిరువగ్రంథగళింద ఉదహరిసి వివరిసిరి. ఇవుగళల్లి యావ యావవు కన్నడకావ్యదల్లి అనివార్యవు? కంద లక్షణవన్ను సంపూర్ణవాగి బరియిరి.

WEDNESDAY, 21ST JANUARY 12 NOON TO 2 P.M

KANARESE TRANSLATION.

I. Translate into Kanarese —[See Urdu Translation paper, p clxxvi].

II. Translate into English —

(1) బరిబరిదంతదంతోడదు కోట్ట నేనిట్టినిమేల్ల నోంపుమం।

సరసపదార్థమంతడకి కాణదిరళ్ద పరోక్తియాక్తి యం।

విరచిసుతంతుమింతుమళిగబ్బుమనాగిసికేళుత్తికా।

లురిజరతోపదుష్కవి మహారవిమధ్యదొళొప్పు లాపనే॥

(2) కేరియక్కి పిరిదినిక్కుం।

శిరరథకేక్కేదుడుం కదిరిసక్కువిగం।

కేరియసిరి పిరిదినిక్కుం।

శిరరథకేక్కేదుడుం కదిరిమనుజంగం॥

(3) మిసునియ దొందాడొడదేం।

పొసతొడవినిసుత్తి బేరిబేరినినువపోల్।

రసవక్కువితామాగం।

రసియల్లి విచక్షణరగళింపొళరినికుం॥

(4) లూగసదల్లిమీరిమిగే పారువదివ్యఖగక్కెబిల్లరిం।

బాగిరి బీసిదొల్వలి యొళొప్పిరి సంజియగేంపుసిక్కెర।

ద్వాగురియల్లి కాలుడిగే పశ్చిమవాధిగే బీళ్వదేం బినం।

బేగదొళిల్లి తక్షగమడంగిదు దాక్షుతతోఁహితాంసు
రం ॥

(5) మహీపతియు లూ సిద్ధాధీశ్వరనన్ను వివిధోపచా
రదిం సత్కరిసి కుశలమం బిసగొండు నిమ్మ ద
రుశనదింద తన్న తను మనె రాజ్యకులవు పావన
మాదుదెందు నుతిగ్గెదు దయగ్గెద కజ్జమంతిభుడు
బేరేనలు సిద్ధ నరపతియ సౌజన్యమం నోడి మ
నది సంతసదాళి నుడిదన్నెయ్యు మహీశ నావు
మేగ్రావగం దుస్సకు తపశ్చర్యదిం సంతప్త
రాదడియు లోకవ్యాపియాగిరు భవత్కీర్తి
కౌముదియ విభవదింద లూప్యాయిత స్వాంతరా
గిరువు నిఖిళ బాహుజర మహోగ్రమకుః ప్రపం
చమంనీకాలకొడియ నాగిరువ కలిపురుషను
గ్రాస మంగ్గెద నవనప్రకాశవు నింమ చారిత్ర
దిందస్తమిత మాదుదదరిందనోడల్గెకంటినెనలు
విశ్వంభరాధిపనురరముగిచ్చెయ్య సిద్ధాధీశ సిద్ధా
ర్థమం నఖిళ నరవరర నుడిగళనుసరిసుతిరుదు.
నిఖిళార్థ సిద్ధిగళ్ నిమ్మ కారతిగళంననుసరిసి
కొండిరువుదిదువినిక్కువ మాదకారణం ధనన
నీధరియల్లి తానెందు నుడియలు సిద్ధ నానరవర్య
వైదగ్ధ్యమం నోడి సంతసగూడి లిదృశ్యాంజనద
కగడిగెయం సిద్ధఘుటికా సకుస్త్ర సంఘుటిత మా
ద మాలెయం మహీపతిగె దయగ్గెదు ధారణా
కర్మగళంతిరుతి తన్నె డెయొళిదర కపదియ
మహోగ్రకరాళ కరవాళమం కరదొళాంతెయ్యు
మహారాజ నమ్మ పూవ జినాప ఘంటారన

నేంబ మహాసిద్ధ శిరోమణియు రాజరాజనిగే ప
మాప్తసఖనాగిజీరమవన సేవెయంనిసగలు విత్తి
శనర్యంత సంతుష్టివడిదు దయదింద తన్న కు
దొళిద్ద నిష్ప్రింశమం నిత్తు గణాధిపర్యమం దయగ్గె
దు మంనిసిదను.

(6) శ్రీకృష్ణ నిరేముంది వంశమం కొందినేం
బీకృత్యదింపాతరం బహుది నిస్నొళ్స
దాకృపానిధియ సాన్నిధ్యమిరుతిరలాగి వాజిమే
ధంబీతుదే ।
బూకృతాంతరనరిదుదిల్లలాలోకదో
శ్రీకృతర కేరదింద హరిమనే మొళిరిగధ
శాకృతియ హరిమోడనే బరిదిసుర ఖూజమిరి శాల్మలి
య నరసువంతే ॥

(7) (a) హత్తర హుల్లరడ్డి ఒబ్బన తలేమేరే.

(b) హంసేయ హాగే నడియ హోగి గుబ్బి కుప్పళిసి
బిత్తు.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 12 NOON

MALAYALAM TEXT-BOOKS AND GRAMMAR

I. (a) കെരഉഭാഷയന്ന വിളിക്കപ്പെടുന്ന മലയാ
ഉഭാഷയുടെ ഉല്പത്തിയെകുറിച്ച എന്ത
അറിയാം.

(b) മലയാഉഭാഷയിൽ എഴുതിയിരിക്കുന്ന പ്ര
ധാന കവികൾ ആര്.

(c) ദ്രാവിഡെ ചിലധാതുക്കൾ
താനാംനാമക്രിയാപദം.
ഉദാഹരിക്കുക.

II (a) കണ്ണകടി - മന്നൻ - ഒരം പദങ്ങൾക്ക ഇപ്പോൾ നടപ്പുള്ള അർത്ഥങ്ങൾ എങ്ങിനെ സിദ്ധിച്ചു.

(b) ഹെരനാദങ്ങൾകെട്ടാൽ പേടിയുണ്ടൊ കേസരിക്ക. ഇത എന്തിനെ ഉപമിക്കുന്നു.

(c) അലസരിൽ കൃപ തവകുല ധമ്മമറിഞ്ഞാലും. ഇത ആര ആരോട എപ്പോൾ പറഞ്ഞത.

(d) ചതിചെയ്യെൻനിന്നെകഴിഞ്ഞജന്മനി.
പ്രതിക്രിയപുനരതിന്നിതുമെടൊ.
ആരെ. അവൻെറ പേര എന്ത. ഇതിൽസൂചിപ്പിച്ച കഥ എന്ത.

(e) യദുവംശം ഉദ്ദേശം ഏത കൊല്ലത്തിൽ നശിച്ചു.

(f) അപഹരതി - രൂപകം - ഉൽപ്രേക്ഷ - ഇവകളുടെ ലക്ഷണങ്ങൾ പഠിച്ച പുസ്തകങ്ങളിൽനിന്ന ഉദാഹരണസഹിതം എഴുതുക.

III. (a) താഴെ പറയുന്ന വിഷയങ്ങളെപററി കവികളുടെ വാക്കുകൾ തന്നെ എഴുതുക.
ദുഷ്ടസംസർഗ്ഗം - ആശ്രിതത്രാണനം - സത്യം.

(b) (1) പൂഞ്ചോലതോറുംനടന്നു
നല്ലംപൂമണംമെല്ലെനുകന്നു
ചാഞ്ചാടിമൊദംകലന്നു
നല്ലചാരുപവനൻവരുന്നു
പഞ്ചമകൂജിതസുകോകിലെ
പരമിഹദെവിസുമംഗലെ
കിഞ്ചനരന്തുമനാകുലെ
കിളിമൊഴിവരികശിലാതലെ.
നിൻചലലോചന നിർജ്ജിതമധുരി
മസഞ്ചിതഭയചലദഞ്ചിതകമലെ.

(2) ഓരൊതരുണിമാരുമായിരമിച്ചനാരതം
യദുകുലകീർത്തി ജഗദിചെത്തുള്ളിൽ
സുദൃഢസ്നേഹചയ്യവുംദീക്ഷിച്ചു.
ഇതുകളുടെ ആർത്ഥം വ്യക്തമായി പറക.

IV (a) പാലാഴിമഥനം കഥ കളിപ്പാട്ട ഉണ്ടാക്കിയ കവി ആരെന്ന ഊഹിക്കുവാൻ കവിതയിൽ തന്നെ ലക്ഷ്യങ്ങൾ വല്ലതുമുണ്ടൊ.

(b) കല്യാണസൌഗന്ധികം കഥ കളിപാട്ടായി വേറെ വല്ലവരും ഉണ്ടാക്കിയിട്ടുണ്ടൊ. ഉണ്ടെങ്കിൽ ആര. അതും കൊട്ടയത്ത രാജാവിൻെറ കവിതയും തമ്മിൽ എന്ത വ്യത്യാസം.

(c) കൊട്ടയത്തതമ്പുരാനെകുറിച്ച അദ്ദേഹത്തിൻെറ കവിതകളിൽനിന്ന എന്ത അറിയാം.

V. (a) കാലെകദാചിദഥകാമിജനാനുകൂലെ

മാലെയമാത്തവിലെളിതമാലതികെ
ലിലാരസെനവിചരൻവിപാനെവിനൊദ
ലൊലാംസമീരണസുതൊരമണീമഭാ
ണീൽ.

(b) മന്ദാകിനീസലിലസതുകപതുവാടീ
മന്ദാനിലാകലിതകൊരകപാരിജാതെ
വൃന്ദാരകാധിപതിരുത്സുകദേവനാൻ
വൃന്ദാനുഗൊരമതനന്ദനകാനനാന്തെ.

ഠരം ശ്ലോകങ്ങളെ അന്വയിച്ച അൎത്ഥ
വ്യക്തമായി പറക

രണ്ടാമത്തെ ശ്ലോകത്തിലുള്ള സമാസ
ങ്ങൾ എന്ത. അവയെ മലയാളത്തി
ൽ വിഗ്രഹിക്കുക.

VI (a) ഇന്ദ്രവജ്ര - ഉപേന്ദ്രവജ്ര - ഇവകൾ തമി
ലും സ്രഗ്ധര - കനകമാലിക ഇവകൾ ത
മ്മിലും എന്തഭേദങ്ങൾ ഉണ്ട. സൌഗ
ന്ധികത്തിൽ നിന്നൊ പാലാഴിമഥന
ത്തിൽ നിന്നൊ ഉദാഹരണങ്ങൾപറക.

(b) കിളിപ്പാട്ടിലെവൃത്തങ്ങൾ സാധാരണയാ
യി എന്തുവിധം. മൌസലം - സ്ത്രീ. ഇ
തുകളുടെ വൃത്തം എന്ത.

VII "മലയാളത്തിൽ നടപ്പുള്ള കഥ കളികളെ യഥാ
ൎത്ഥത്തിൽ നാടകങ്ങൾ എന്ന പറഞ്ഞുകൂടാ. അതുക
ളുടെ എല്ലാത്തിന്റെയും ആരംഭം മിക്കതും ഒരുപോ
ലെ തന്നെയും നിഷിദ്ധമായിട്ടുള്ള സാപത്നിത്വം ആ
ചരിച്ചവരുന്ന രാജാക്കന്മാരുടെ രതിക്രീഡകളെ വൎണ്ണി

ച്ചും നായകീ നായകന്മാരെക്കൂടാതെയും അഥവാ ഉണ്ടായിരുന്നാൽ തന്നെ അവക്ക വിശേഷമായ വല്ല ഗുണങ്ങളെ സങ്കല്പിക്കാതെയും സങ്കല്പിക്കുന്ന ഗുണത്തെ ഭേദഗതിയും പരസ്പര വ്യത്യാസവുംകൂടാതെ ആദ്യവസാനംവരക്കും ആചരിക്കാതെയും ആകുന്നു. ഒരു സ്ഥിതിക്ക അതുകളിലെ വേഷക്കാരിൽ ഒരാൾക്കുപകരം മറെറാരാളെ ചേക്കുന്നതകൊണ്ട കഥയുടെ രസത്തിനൊ ഉദ്ദേശത്തിനൊ ഒരുഭംഗവും വരുന്നതല്ല. വിശേഷിച്ച വല്ല പൊരുളും മലയാള നാടകങ്ങളിൽ നിന്ന ഗ്രഹിക്കത്തക്കത ഉണ്ടായിരുന്നാൽ ആയത നാട്ടുകാരുടെ സ്വഭാവത്തിന യോജിച്ച സ്വതല്പരതയെയൊ ദയ്യകല്പാതത്തെയൊ സംബന്ധിച്ചിരിക്കുകയും ചെയ്യും".

മേൽപറഞ്ഞത മലയാള നാടകങ്ങളെപററി ഒരാളുടെ അഭിപ്രായമാകുന്നു ഇത ശരി തന്നെയൊ അല്ലങ്കിൽ.

(a) കല്യാണ സൌഗന്ധികത്തിലെ നായകീ നായകന്മാർ ആർ. കഥയുടെ "രസം" എന്ത.

(b) അവക്ക ഗ്രന്ഥകർത്താവ കല്പിച്ചിട്ടുള്ള "വിശേഷ ഗുണങ്ങൾ" എന്ത.

(c) കഥക്ക എന്ത "പൊരുൾ" കല്പിച്ചിരിക്കുന്നു.

(d) ഒരു കഥയിൽ ധർമ്മപുത്രരെ ഭീമസേനനും കുന്തിയെ പാഞ്ചാലിക്കും ജടാസുരനെ ഹനുമാനും പകരം ചേർത്താൽ കഥയുടെ "രസത്തിനൊ ഉദ്ദേശത്തിനൊ" എന്തെങ്കിലും ഭംഗംവരുമൊ.

WEDNESDAY, 21ST JANUARY, 12 NOON TO 2 P M

MALAYALAM TRANSLATION

I Translate into Malayalam—[See Urdu Translation paper, p clxxvi]

II Translate into English—

(a) ജാതനായാൽ മൃതനാമവനന്നൊരുനീതി ചമെച്ചതുനീരജസംഭവൻ

കാലചക്രഭ്രമംപാർത്തു കണ്ടാലൊരുകാലവുംദുഃഖിപ്പതിനില്ലകാരണം

ജീർണ്ണവസ്ത്രംകളഞ്ഞുപൊട്ടുമാനുഷർപൂർണ്ണശോഭംനവവസ്ത്രധരിച്ചീടും

ജീർണ്ണദേഹംകളഞ്ഞുവർണ്ണംദേഹികൾ പൂർണ്ണശോഭംനവദേഹങ്ങൾകൊള്ളുന്നു

നിത്യമല്ലെന്നുമെദേഹാതികളിതുനിത്യമാകുന്നതുനിശ്ചയമീശ്വരൻ

ചത്തും പിറന്നുമിരിക്കുമീജന്തുക്കൾ ചിത്തെസുഖദുഃഖമെന്തിന്നതിന്നഹൊ

എന്നുതുടങ്ങിയതെന്നുമറിഞ്ഞിതില്ലെന്നി നികറുന്നതെന്നുമറിഞ്ഞീല

ആദ്യന്തമില്ലാതകേവലൻ വേലകൾക്കാദ്യന്തമില്ലെന്നറികധരാപതെ.

(b) അമൃതനാഥാപൊരുവതി നടുത്തുവാടാ സുരോത്തമബതതിലൊത്തമാദികൾ മൃത്തത്തമൊഴികളൊടയത്തുദിനമനുജയത്തി ലതിശയംപുമാഴിമദമൊടുവിധത്തിൽ മരുവുകനിറത്തൊടിത്തനിവരാപടുതാ മനവധിനിടിച്ചു പലരൊടു മടു

ത്തു പൊരുമൊരുമടുക്ക നിനിവരുമൊടുക്ക മതിനുട നടുത്തു മയിശരമെടുത്തു വിരവൊടു തൊടുക്കപരിചിനൊടു - കുലക്ഷയത്തിനു നി നക്കിലിഹബഹുസുലക്ഷണം പലതരത്തി ലുപഗതം ബലക്ഷയന്തവവരുത്തി മദശ നിയമക്ഷയത്തിനു വഴിക്കുതുണവരും അമ ത്യവൈരിൻ വിരവിനൊടടുത്തു വാടാസ്മരി ച്ചു നിജബലമുറച്ചു പൊരുതുകമരിച്ചു രണഭൂ വീശയിച്ചു തവതനുഭുജിച്ചുഖഗതതിമദിച്ചു ദി ശിദിശിചരിച്ചു ചപലതതികച്ചു മദംവിടും അ ലംവൃഥാതവവിജല്പിതം ശംബലംവരന്തവഭ വിക്കിലെന്നൊടു പരംപരാക്രമ പരംപരാ കുരുനിലിമ്പ ദൃഷകവിഉമ്പ മെന്തിനിത.

(c) ശ്മശാനത്തിനു സമീപത്തുള്ള സ്ഥലങ്ങളിൽ വസിക്കുന്നവർക്കു മിക്കനാളും പ്രെത ധൂമത്തെ ശ്വസിപ്പാനിടയാകുന്നു. കുഴിച്ചിടുന്ന സ്ഥല മായാലും ആ പ്രേതം ദ്രവിച്ചു അതിലേ വി ഷപസ്തുക്കൾ അതിന്നടുത്തുള്ള കൂപതടാകാ ദികളിലും സമീപത്തുള്ള ശാകാദികളിലും വ്യാപിക്കുന്നതായിരിക്കും. — എല്ലാവിഷത്തി നും നിവാരണമുണ്ടു, മനുഷ്യദേഹം മൃതിപ്പെ ട്ടു അഴകിത്തുടങ്ങിയാൽ ആ ജഡം വിഷമാ യിഭവിക്കും. തദ്വിഷനിവാരണം അതി ൻെറ വിഷമാരുതം വല്ല ഇന്ദ്രിയങ്ങൾക്കും വിഷയമായി ഉള്ളിൽ പ്രവേശിക്കപ്പെടാതിരി

ക്കതന്നെ. സ്പഷ്ടമായി പറക എന്നാൽ ഒരു പ്രകാരത്തിലും ഏതൊരു പ്രാണിയും ചത്ത ജഡം അഴുകിയാകുള്ള ആവിയൊ ഗന്ധമൊ വല്ല ഭാഗങ്ങളോ ജീവദേഹത്തിൽ പ്രവേശിക്കരുത എന്നു തന്നെ. ഇതിന്നു ദൃഷ്ടാന്തം ശവശരീരത്തെ ഭേദിച്ചു ശോധന ചെയ്യുന്നതിന്നു അംഗ്ലീയ വൈദ്യന്മാർ ഉപയോഗിക്കുന്ന ശസ്ത്രങ്ങളിൽ ഒന്നിന്റെ ലേശഭാഗംമാത്രം കൊണ്ടു ആ വൈദ്യന്റെയൊ അന്യന്റെയൊ ചർമ്മഭേദനത്തിന്നു പോലും സംഗതിവന്നാൽ മറെറാരു കത്തികൊണ്ടു അതിന്നടുത്തുള്ള ഭാഗത്തോടു കൂടി ഉടൻ ഛേദിക്കാത്തപക്ഷം ആ ശസ്ത്രവിഷം അവനെ മൃതിപ്പെടുത്തുന്നതുതന്നെ.

WEDNESDAY, 21ST JANUARY, 3 TO 5 P M

ORIGINAL COMPOSITION IN VERNACULAR LANGUAGE.

Write an Essay on—

The importance of the general diffusion of Education throughout all classes of society.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

PURE MATHEMATICS.

I. Solve the equations—

$$49\,(x^2 + a^2)\,(y^2 + b^2) = 50\,(xy + ab)^2.$$
$$(x^2 - a^2)\,(y^2 - b^2) = 24\,(bx - ay)^2.$$

II. Assuming the truth of the Binomial theorem for any positive index, prove it for any negative index.

Expand $\frac{1}{x^2 - 5x + 6}$ in a series, (1) of the form $p_0 + p_1 x + p_2 x^2 + p_3 x^3 + \ldots$, (2) of the form $q_0 + \frac{q_1}{x} + \frac{q_2}{x^2} + \frac{q_3}{x^3} + \ldots$; and prove that $q_{n+1} = 6^n p_{n-1}$.

III. In any plane triangle, prove—

(1) $a : b : c :: \sin A : \sin B : \sin C$.

(2) $\sin^2 A + \sin^2 B + \sin^2 C = 2 + 2 \cos A \cos B \cos C$.

Also, if $b - a = 3c$, prove that

$$A + \frac{C}{2} = \text{Cos}^{-1}\left(3 \text{ Cos } \frac{C}{2}\right), \text{ and that}$$

$$3 \text{ Sin } B \text{ Cot } \frac{B - A}{2} = 1 + 3 \text{ Cos } B.$$

IV. Find an expression for the radius of the circle described about a triangle.

In a triangle ABC, points D, E, F, are taken in the sides BC, CA, AB respectively such that $BD = m.\ BC$, $CE = m.\ CA$, $AF = m.\ AB$ R, x, y, z, are the radii of the circles described about the triangles ABC, AEF, BFD, CDE respectively: prove that $a^2 x^2 + b^2 y^2 + c^2 z^2 = (3m^2 - 3m + 1)(a^2 + b^2 + c^2) R^2$.

V. The angle at the centre of a circle is double the angle at the circumference on the same arc.

A quadrilateral is such that it can have a circle described about it, and also a circle inscribed in it. Prove that the straight lines joining the opposite points of contact of the inscribed circle are at right angles.

VI. Prove that the rectangle contained by any two sides of a triangle is equal to the rectangle contained by the diameter of the circumscribed circle and the perpendicular on the third side from the opposite angle.

ABC is a triangle inscribed in a circle: AD is drawn touching the circle and meeting BC produced in D. Prove that the diameters ofthe circles described about the triangles ABD, ACD, are to one another in the ratio of AD to CD.

VII. If TP, TQ be two tangents to a parabola whose focus is S, prove that the triangles PST, TSQ are similar to one another.

Given two tangents to a parabola and the point of contact of one of them, prove that the locus of the focus is a circle.

VIII. The tangent at any point of an ellipse is equally inclined to the focal distances of the point, and the normal bisects the angle between them.

Prove that the circle which is described about the triangle whose angular points are the foci and any point P of an ellipse passes also through the points in which the tangent and normal at P meet the minor axis.

IX. If from any point P of an hyperbola straight lines PM, PN be drawn parallel to the asymptotes and meeting them in M, N respectively, prove that the rectangle contained by PM, PN will be constant.

Two angular points of an equilateral triangle are respectively the centre and one focus of an hyperbola, and one side of the triangle is an asymptote: find where the other two sides are cut by the curve.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

STATICS AND DYNAMICS.

I. Two unlike couples in the same plane will balance each other if their moments are equal.

Equal forces (P) act along the sides taken in order of a regular octagon inscribed in a circle. Shew that they might be replaced by two unlike parallel forces, each equal to $P\sqrt{8+4\sqrt{2}}$, acting at the extremities of any diameter of the circle.

II. Find the magnitude of the resultant of three forces P, Q, R acting in one plane on a particle; and deduce the values of $P : Q : R$ when there is equilibrium.

A heavy cube (weight W) has its face horizontal and is movable about one of the edges of the upper face; show that a force $\frac{W\sqrt{3}}{2}$, acting along a diagonal not meeting the edge, will maintain the cube in equilibrium.

III. Having given the centres of gravity of a body and of a known part of it, find the centre of gravity of the remainder.

The sides BC, CA, AB of a triangle ABC are produced to a, b, c such that Ca, Ab, Bc are respectively equal to BC, CA, AB. Prove that the centre of gravity of three equal weights placed at a, b, c coincides with that of the triangle ABC.

IV. Find the ratio of P to W in that system of pulleys in which the strings are all parallel, and the weights of the pulleys assist the power.

If the weight be hung from a horizontal bar to which the strings are attached, and if there are, in all, four pulleys, each of diameter one foot and weight w, the distance of the point of suspension of the weight from the line of action of the power is $\frac{4}{5}\left(32+\frac{23w}{W}\right)$ inches.

V. State the Second Law of Motion, and deduce the formula $P = mf$.

A certain force is represented by P when τ seconds, σ feet and μ pounds are the units of time, length and mass respectively: what will be the measure of this force when t seconds, s feet, and m pounds are the respective units?

VI. State the experimental facts used in determining the change of motion when two smooth imperfectly elastic spheres collide.

Two equal balls, A and B, are placed on a smooth horizontal table in a line perpendicular to an elastic wall C. The ball A, moving with velocity u, impinges directly on B, which, after reflexion at C, returns and collides with A. Find the velocity of A after the second impact, given that the coefficient of elasticity is the same for A, B, C.

VII. Investigate the path of a heavy particle projected in any direction.

A balloon rises vertically with uniform acceleration; two minutes after starting, when it has attained a height of 1,600 yards, a stone is projected from it horizontally with a velocity of 32 yards per second: find where it will strike the ground.

VIII. A particle starts from rest at the extremity of the base of a smooth cycloid whose axis is vertical and vertex downwards. Find the time of descent to the vertex.

The force of gravity at the North Pole is represented by 32 253 and that at Madras by 32 134. Find how many beats a Madras seconds' pendulum will gain in a day at the North Pole.

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

HYDROSTATICS AND PNEUMATICS.

I. From the definition of a fluid, deduce its fundamental property. Explain the "Hydrostatic Paradox."

A conical vessel, weight w, is filled with fluid of total weight W, and placed with its base downwards on the scale of a balance. What will be the pressure on the base of the vessel, and what counter-weight must be placed in the other scale to produce equilibrium?

II. Two liquids that do not mix meet in a bent tube. Show that their specific gravities are inversely as the heights of their free surfaces above the common surface.

A fine tube is bent into the form of a hyperbolic branch, with vertex downwards, and axis vertical. Any quantities of two liquids of densities ρ, and ρ_1 are poured into it. If r, and r_1 are the distances of the free surfaces from either of the two foci, show that the distance of the common surface from the same focus is $\frac{r\rho - r_1 \rho_1}{\rho - \rho_1}$.

III. Distinguish between whole pressure and resultant pressure.

A hollow cone, vertical angle $2 \cot^{-1} 2\sqrt{2}$, filled with a fluid, is held with its vertex downwards, and its axis inclined to the horizon at an angle θ. Find the normal pressure on the whole surface including the base, and shew that this pressure will be a maximum when $\cot \theta = \sqrt{2}$.

IV. Equal masses of three inelastic fluids whose densities are as 1 : 3 : 5, are disposed in layers in a prism whose base is horizontal and sides vertical. Shew that the whole pressures exerted by the three fluids on any side of the prism are equal and that if the three fluids be mixed together, the total pressure on the side will be increased in the ratio of 23 to 15.

V. Give the conditions of equilibrium of a floating body, and state when the equilibrium is stable.

A lamina is formed by joining an isosceles triangle with a semicircle, whose diameter $2a$ coincides with the base of the triangle. The lamina floats in water in a state of neutral equilibrium, having its axis vertical and four-fifths of the semi-circle immersed. If the

specific gravity of the latter be 0·4, shew that the sp. gr. of the triangle is $\frac{\pi^2}{20}$ and its altitude $\frac{4a}{\pi}$. (C. G. of semi-circle at $\frac{4a}{3\pi}$ from its centre).

VI. Establish Boyle's law, for dilatation only.

An iron sphere, radius $\frac{h}{4}$, is placed in a smooth horizontal cylinder in which it exactly fits, with its centre at a distance $4h$ from one end of the cylinder. This end is then closed, the other remaining open. Assuming the sp. gr. of iron to be to that of mercury as 4 : 7, compare the angles through which the cylinder must be tilted about its extremities in order that the centre of the sphere may move through a distance equal to its own diameter on either side of its original position; and shew that the sines of these angles are as 10 : 13.

(h = height of mercurial barometer.)

VII. Explain briefly the construction of Smeaton's Air Pump, and find the density of the air in the receiver after n strokes.

Two barrels of capacities a and c respectively, the one condensing and the other exhausting, are connected with a receiver of capacity R; and take their strokes alternately, beginning with a. Find the density of the air in the receiver after three double strokes.

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

OPTICS AND ASTRONOMY.

I. Distinguish between direct and centrical incidence.

A small convergent pencil is incident directly on a reflecting surface, plane, convex, or concave. Determine in each case whether the image will be real or virtual, erect or inverted.

Two mirrors, one concave and the other convex, radii r and $2r$, face each other. A luminous point is situated between the two, on their common axis, at a distance $\frac{4r}{5}$ from the concave, and $\frac{r}{5}$ from the convex mirror. Trace, through two reflexions at each surface, a ray of light proceeding thence, and falling first on the concave mirror; and shew that by these four reflexions, two images will be formed, one real and the other virtual, at the principal foci of the mirrors.

II. State the general laws of refraction.

A cylindrical vessel is $12\frac{1}{2}$ inches deep and 12 inches in diameter. The lowest point of the vessel that can be seen over its rim by an eye in a given position, when the vessel is empty, is 9 inches from the top. Water ($\mu = \frac{4}{3}$) is poured in. At what depth should the water stand so that the remotest point of the base might become just visible?

III. How can the focal length of a convex lens be determined experimentally?

A convex lens held 8 ft. from a screen forms on it a distinct image of a gas-light. A concave lens of the same focal length being then placed on the same axis mid-way between the convex lens and the screen, it is found that in order to restore distinctness to the image, the screen has to be moved 8 ft. further from the light. Find the distance of the latter, and the focal length of the lenses

IV Determine the angular radius of the field of view in Galileo's telescope. Why would a stop prove useless in such an instrument?

V. In a simple astronomical telescope, if the apertures of the eye glass and the object-glass be e and o respectively, and m, the magnifying power, prove by means of a figure that the diameter of a stop that will cut off the ragged edge of the field of view must be equal to $\frac{me - o}{m + 1}$.

VI. (*a*) Define solstitial colure and prime vertical.

(*b*) Distinguish between terrestrial and celestial longitude.

(*c*) What astronomical co-ordinates correspond to geographical latitude and longitude?

(*d*) Mention three other systems of co-ordinates.

VII. The greatest meridian North and South zenith distances of the sun throughout the year, at Madras, were observed to be $10°\text{-}23'\text{-}8''$ and $36°\text{-}31'\text{-}24''$ respectively. Hence determine the obliquity of the ecliptic and the latitude of the Madras observatory.

VIII. Define the equation of time. Shew that the equation of time due to the obliquity of the ecliptic vanishes four times a year.

IX. Explain what is meant by Libration in longitude.

Apply Kepler's third law to determine in what proportion the

distance of the moon from the earth should be increased in order that the whole of her surface might be seen in the course of an orbital revolution?

X. Prove that in the existing circumstances the maximum number of eclipses that may occur in one year is seven

XI. Name five different methods for determining the longitude of a place by observations of the moon. Describe any one of them

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THURSDAY, 22ND JANUARY, 10 A.M TO 1 P.M.

BOTANY.

I. In what essential way does the germination of the spore of a *fern* differ from the germination of the seed of *phanerogams*?

II. Describe the various kinds of tissues which you would find in the stem of a plant, such as *jute*, beginning with those which lie on the outside of the stem.

III. How, by means of the fruit *only*, would you determine that a plant belonged to *Solanaceæ* and not to *Boragineæ*?

IV. What are the proximate principles of plants?

V. Explain the meaning of the following terms, and mention some one plant or part of a plant to which each term would apply:—

1 Evergreen.	4 Parasitical.	7 Diœcious.
2 Caducous.	5 Epiphytical.	8 Monœcious.
3 Aquatic.	6 Cellular.	9 Gymnospermous.

VI. Describe in technical language the plants marked A and B, and refer them to their natural orders.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

PHYSICS.

I. Describe the piezometer and the method of using it.

II. Define capillarity and state its laws. Capillarity in some cases causes attraction and in others repulsion between floating bodies; state the conditions under which these actions are manifested.

III. Describe any experiment you know illustrating the diffusion of gases. What is the law connecting the velocity of diffusion with the density of the gas?

IV. What is the temperature of water at its maximum density? How may it be determined? What influence has the phenomenon of the expansion of water before freezing on the freezing of water by natural cold?

V. Distinguish between quantity of heat and temperature. How is quantity of heat measured? Describe some form of apparatus employed for the purpose.

VI. How do you explain latent heat? Describe a method of measuring it in the case of a liquid becoming converted into a vapour.

VII. Explain by the aid of a diagram how multiple images of an object may be formed by means of two mirrors. Shew how the number of images varies with the inclination of the mirrors, giving the number of images when the mirrors are at certain definite angles. Describe the Kaleidoscope.

VIII. What is chromatic aberration? and how is it caused? How is achromatism produced?

IX. What do you mean by the polarizing angle of a substance? What is the law connecting it with the index of refraction of the substance?

X. What is meant by lines of magnetic force? How may they be illustrated experimentally? Draw approximately the lines of force in the following cases:—(*a*) a bar magnet, (*b*) a horse-shoe magnet, (*c*) two similar horse-shoe magnets in one plane with similar poles facing each other.

How are the lines of force in the case of a horse-shoe magnet modified by bringing a piece of soft iron near its poles?

XI. How did Wheatstone measure the duration of an electric spark? By what may the duration of the spark be modified? Explain also Wheatstone's application of the same method to the measurement of the velocity of electricity in the case of the discharge of a Leyden Jar through a wire, and give the results of his experiments.

XII. State the two simple laws governing the action of currents on each other, and show how they may be exemplified.

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

CHEMISTRY.

I. How would you prove that the following substances are mixtures, and not chemical compounds or simple substances?—

(*a*) Gunpowder, (*b*) Sea water, (*c*) A mixture of hydrogen, Carbonic anhydride and oxygen, (*d*) A mixture of iron and sulphur.

II. Compare the properties of Chlorine, Bromine, and Iodine under the following heads:—

(*a*) Physical characters, (*b*) Combination with hydrogen, (*c*) Combination with metals, (*d*) Combination with oxygen.

III. Under what pressure will one gramme of hydrogen occupy a space of one litre at a temperature of 15°C?

IV. How may the following substances be distinguished by dry tests:—

(*a*) Copper, (*b*) Zinc, (*c*) Iron, (*d*) Manganese, (*e*) Magnesium, (*f*) Aluminium.

V What is the action of—

(*a*) Sulphuretted hydrogen on Chlorine.

(*b*) An aqueous solution of Caustic potash on Phosphorus.

(*c*) Sulphuric acid on Chlorate of potash.

(*d*) Sulphuric acid on fluor-spar.

VI. 10 grammes of a solution of hydrochloric acid are added to marble and the escaping gas passed into a solution of Barium chloride. The precipitate weighs 7·09 grammes. What was the percentage of hydrochloric acid in the solution used?

VII. Describe the method of determining the atomic weight of a new element.

VIII. How would you obtain:—

(*a*) Iodine from potassic iodide.

(*b*) Peroxide of lead from litharge.

(*c*) Chlorate of potash from caustic potash and chlorine

IX. Describe, in detail, the manufacture of Sodic carbonate from common salt.

X. Enumerate the chief ores of Copper. How is metallic, copper obtained from copper ore?

N.B.—In describing chemical reactions equations should be given when possible. Ba = 137.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

LOGIC.

I. Examine the following :—

(1) Formal Logic deals exclusively with names, (2) Formal Logic is a collection of rules for thinking grounded on a scientific investigation of valid thought.

II. (1) How do the Predicables illustrate the distinction between Verbal and Real Predication?

(2) Point out the relations of Genus, Species, Difference Property, and Accident respectively, to the connotation of the subject of which they are the predicates.

III. State the views of Dr. Bain and Sir W. Hamilton regarding the nature and purpose of the Categories of Aristotle.

IV. State the different views held by Logicians regarding the Import of Propositions, and indicate, with reasons, the one you adopt. What does Dr. Bain mean by the 'Judgment theory' of propositions, and what are the 'defects inherent' in it?

V. State and criticise Hamilton's doctrine of the thoroughgoing Quantification of the Predicate. Do you consider Bain's criticism of Hamilton's additions to E and O as valid?

VI. State and criticise the several views that have been advanced regarding the position and treatment of modals in Logic.

VII. Logicians differ as to whether Immediate Inference is real inference or not. Discuss this point. Discuss the question whether the Hypothetical Syllogism is a case of Immediate or Mediate Inference.

From all S is P, infer (1) All not-P is not S, and (2) Some not-S is not P.

From no S is P, infer Some not-S is P.

VIII. "It is the peculiarity of the Syllogism," says Dr. Bain, "that the conclusion does not advance beyond the premises." How would you reconcile this statement with the real accessions to our knowledge made by the deductive process? How does Mill meet the charge of *petitio principii* brought against the Syllogism?

IX. (*a*) Some Logicians have held that a Syllogism in any other than the First Figure must be reduced to that figure in order that its validity may be conclusively established. State, with reasons, whether you agree with this or not.

(*b*) In objecting to the Fourth Figure, Hamilton grounds his dislike on the circumstance, that the premises proceed in the whole of comprehension while the conclusion is drawn in the counter whole of extension. Explain and exemplify. State, with reasons, whether you would retain or reject the Fourth Figure?

X. Given the truth of one premise and of the conclusion, can we establish the truth of the other premise?

XI. It has been pointed out that certain arguments are more naturally put in one than in any other of the first three figures.

Put the following arguments into syllogistic form, and in the figures that best suit them respectively:—

(1) How can any one maintain that pain is always an evil, who admits that remorse involves pain, and yet may sometimes be a real good?

(2) We have no right to treat heat as a substance, for, it may be transformed into something which is certainly not a substance, namely, mechanical work.

(3) Aristotle asks how it is possible to identify "Will" with "Wish," and argues that we often wish for what we know to be impossible, while the object of our volition is always something that is conceived to be within our power.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

LOGIC.

I. Show that in the natural order Induction precedes Deduction. How do you explain the fact that this is not the order in which the science of Logic has been developed nor the order in which it is usually taught?

II. There are various forms of reasoning that simulate Induction, but which must be discriminated from it. Give examples of these, and explain what they really are.

III. State clearly the relations of Universal Causation to the Uniformity of Nature. Is the Uniformity of Nature an Induction? Discuss this point.

IV. State and illustrate the difficulties in application and the defects in result of the methods of Agreement, Difference, Double Agreement, and Concomitant Variations, respectively.

V. State the nature, the forms, the limits, and the fallacies of Scientific Explanation.

VI. How does the doctrine of Chance aid inductive investigation in those cases where the experimental methods are inapplicable? Illustrate your answer by a concrete example.

VII. Point out the uses of Empirical Laws and Hypotheses in inductive inquiry.

VIII. "Nothing is credible that contradicts experience." Criticize.

IX. State and bring out the full meaning of what has been called the golden rule of classification. Describe the principal forms of classification, pointing out their respective merits and defects.

X. State and justify your views as to the position and treatment of Fallacies in a logical treatise.

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

THEORY OF MORALS.

I. (*a*) Psychologists, as Reid and Stewart, have treated Ethics as a branch of that subject. Examine whether it can be adequately so treated, or examine the relation of Ethics to Psychology.

(*b*) If, with Bain, we regard Ethics as a *practical* science, or a science that lays down rules for the guidance of human activity, examine in what way Ethics differs from other practical sciences, as *e. g.* Politics.

II. Philosophies of Morals are usually regarded as fundamentally resolvable into two These have been variously designated as Intuitional and Experiential, Independent and Dependant, *a Priori* and *a Posteriori*.

Explain these designations as thus applied.

III. Mr. Mill says· "The morality of the action depends entirely upon the *intention*," but "the *motive* has nothing to do with the morality of the action, though much with the worth of the agent." At the same time, Mr. Mill holds that the *end*, (*viz.*, the production of Happiness) is the standard of right conduct.

Explain these statements by defining *motive*, *intention* and *end*, and give, with reasons, your own opinion.

IV. Under the head of the *Psychology of Ethics*, two questions are usually discussed, *viz*, Free Will and Disinterestedness.

State precisely what these questions are about, and inquire what bearing, if any, they have on Ethics.

V. Examine whether the statement made by Dr Bain, to the effect, that by those who accept the doctrine of a Moral Sense the questions of the Standard and of the Faculty are reduced to one, holds good

VI. (*a*) On the assumption that Morality is a law or principle inherent in Reason or Conscience, is it possible to account for the great discrepancy between moral rules in different ages and countries?

(*b*) On the assumption that the essence of Virtue is Utility how would you account for the fact that every human utility is not accounted virtuous, and that terms implying moral approbation are not applied to beneficial actions performed by the lower animals, or to the beneficial effects of inanimate objects?

VII. It is argued by Dr. Bain that what constitutes morality, or the morally obligatory, is authoritative enactment, whether of government or of society. At the same time he assumes that it is competent for us to enquire whether the morality so constituted is the morality that ought to be

Does this imply that there is an *ought* antecedent to the *ought* of morality, and if so, what is its nature?

VIII. State Dr. Bain's proof of the Principle of Utility, and give your reasons for agreeing or disagreeing with it.

IX. State and criticise Butler's doctrine of the Coincidence of Virtue and Utility.

X. Distinguish between the answers given to the question of the Faculty by the Associational and the Evolutional Moralist. How is the theory of the latter supposed to mediate between Intuitional and Experiential Morality?

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

MORAL PHILOSOPHY DURING THE XVIIITH CENTURY.

I. "During the first half of the XVIIIth Century the efforts to construct Morality on a philosophical basis took more or less the form of answers to Hobbes."

In what way did each of the following answer Hobbes:—Cudworth, Cumberland, Butler?

II. "Cumberland may fairly be called the precursor of modern Utilitarianism."

Point out on what grounds he may be so called, and examine whether there is anything in his system that prevents its complete identification with Utilitarianism.

III. By what arguments does Hume resolve Justice into Utility? What parts respectively does Hume assign to Reason and Sentiment in our Moral decisions?

IV. Examine Adam Smith's resolution of moral approbation into sympathy, and state the grounds of your agreement or disagreement with it, as the case may be.

V. (*a*) It is argued that when Kant would show that the maxim of any action is inconsistent with the Categorical Imperative, he is obliged to take consequences into account.

Enquire whether this is so, or whether it is so in such a way as to be fatal to his theory.

(*b*) Explain what is meant when it is said that, in his Ethics, Kant took in by the back door what he had

dismissed by the front door in his Intellectual Philosophy.

VI. On the one hand Butler says that "Man was made for virtue" and on the other that "Virtue consists in acting in conformity with the nature of man."

Show that there is a seeming contradiction here, and examine whether there is anything in Butler's system that can reconcile it.

VII. Paley and Bentham assume that the only possible motive is an egoistic one, while at the same time they regard the standard as an altruistic one.

By what means then do they respectively seek to harmonize the motive with the standard?

VIII Compare the place given to moral Sentiment by Kant with that assigned to it by Hutcheson or Brown.

IX. "Wollaston's theory of moral evil closely resembles the most paradoxical part of Clarke's doctrine." Explain.

X. Taking the system of Helvetius as a type of the prevailing Ethics of France in the XVIIIth Century, characterise it, and point out its connection with the psychology that had been rendered popular in France a little before the appearance of his system.

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

MENTAL PHILOSOPHY

I (*a*) What are the chief difficulties encountered in all attempts to ascertain experimentally the functions of the different parts of the brain?

(*b*) How would you reconcile the fact that the brain is exhausted by mental labour with the apparently opposite fact that the brain acts more freely after it has been at work for some time?

II. Describe the structure and function of the eye both as a sensitive and as a moving organ.

How does the mind deal with the double image and the inverted image?

Are extension and distance original or acquired perception of the eye? Discuss the question.

Compare our optico-muscular and our tacto-muscular powers with reference to the part they respectively play in connexion with our knowledge of the external world.

III The Seat of Revived Impressions:

(*a*) What is meant by "the Seat of Revived Impressions"?

(*b*) What view does the expression take for granted as to the connexion between mental and bodily states?

(*c*) What *is* the seat of the revived impression according to Dr. Bain?

(*d*) Examine the evidence adduced by Dr. Bain in support of his doctrine, for the purpose of showing (1) whether the evidence really supports his conclusion, (2) whether the facts embraced in the evidence are consistent with any other hypothesis than his.

(*e*) Mention the more important practical consequences that follow from the adoption of Dr. Bain's view.

IV. How do you account for (*a*) the general loss of Memory that accompanies old age; (*b*) the fact that in old age, while the memory of the events of early life may be as fresh as ever, the recollection of the most recent events may be greatly impaired or may entirely fail?

V. The localization of Bodily Feelings:

(*a*) What is meant by a *Bodily Feeling?*

(*b*) What is meant by *localizing* such a feeling?

(*c*) Is the power to localize bodily feelings instinctive or acquired? Give your reasons. If you adopt the view that it is acquired, describe the mode of acquisition.

VI. To what extent and in what ways is mental reproduction influenced (*a*) by Emotion, and (*b*) by Will?

VII. Distinguish carefully between Memory, Conception and Imagination. How do the scientific, the practical, and the artistic forms of Imagination differ from one another?

VIII. How do we obtain a knowledge of the feelings of our fellow-men? What psycho-physical principles underlie the interpretation and estimate of feelings, and what are the chief difficulties encountered in applying them?

IX. Mill holds that on his theory of Mind, we have the same evidence for the existence of other minds as we have on the popular theory.

How does Mr. Masson reply, and what is your opinion of the rejoinder?

X. Mr. Masson admits that Hamilton's language in discussing the problem of External Perception is not always in apparent consistency with his professed adherence to the doctrine of the Relativity of Knowledge.

How does Mr. Masson propose to deal with this apparent inconsistency? What do you think of his explanation, and how does it affect Hamilton's cosmological theory?

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

HISTORY OF ENGLAND.

I. What privileges were conferred on London and other towns by the Charters granted to them by Henry I? Explain the organization introduced by Henry I, which brought the Courts of Justice and the revenue of the country immediately under the supervision of the Crown.

II. What was the nature of the "New Learning" movement in the time of Henry VII? Who were the chief promoters of the movement? What influence had it on education in England?

III. On what charges was Mary Stuart put to death? How did her death hasten the rupture between England and Spain?

IV. (*a*) What led (1) to the war with Spain (1743), and (2) to the war of the Austrian Succession?

(*b*) What territories did England acquire, (1) by the Treaty of Utrecht, (2) by the Peace of Paris (1763), (3) by the Peace of Paris (1815).

V. In what reign was each of the following Statutes passed? Explain the nature of each, and give the causes that led to their enactment. Statute of Heresies· Reciprocity of Duties Bill The Riot Act: Poyning's Law.

VI. What great constitutional principle was settled by the Revolution in 1688? With whom rests the power of the sword, and what limitations have been placed upon its increase?

VII. With what historical events are the following associated? "The Patriots"; "The United Irishmen"; "The Luddites"; "The Root-and-Branch men"?

THE HOUSES OF YORK AND LANCASTER.

I. Describe the condition of the English peasantry in the time of Richard II.

II Write a short account of the Lollard movement.

III Write a note on each of the following extracts from Shakespeare's Historical Plays (relating to the Lancaster and York epoch), stating as plainly and briefly as you can the historical fact, facts, or circumstances alluded to in each:—

(a) "He * * suffered his kinsman March
* * * to be engaged in Wales
There without ransom to lie forfeited."

(b) *King of England.* "Shall Kate be my wife?
King of France. So please you.
* * * * * *
E. of Westmoreland. The King hath granted every article;
His daughter first, and then in sequel all."

(c) Now is Mortimer lord of this city. And here sitting upon London stone, I charge and command that, of the citizens' cost, the conduit run nothing but claret wine the first year of our reign And now henceforth it shall be treason for any that calls me other than Lord Mortimer."

(d) "Now to London with triumphant march,
There to be crowned England's royal king:
From whence shall Warwick cut the sea to France,
And ask the Lady Bona for thy queen."

IV. Give a brief account of the position and influence of Parliament during the reign of Henry IV.

V What, *in your opinion*, would have been the probable results of Warwick's ascendency during the short term of the restoration of Henry VI to nominal power, if that ascendency had been durable and effectual?

VI (*a*) How was it that notwithstanding the violent acts of Richard III his reign was not at first unpopular?

(*b*) What great constitutional principle was *virtually* settled by the marriage of Henry VII with Elizabeth of York?

B A DEGREE EXAMINATION, 1885.

WEDNESDAY, JANUARY 21ST, 10 A M TO 12 NOON.

URIYA—TEXT BOOKS AND GRAMMAR.

I. ବିରାଟପର୍ବର ରଚନା ଓ ଶ୍ରବଣର ଦୋଷ ଗୁଣ ସମ୍ବନ୍ଧରେ ତୁମ୍ଭର ଯାହା ବକ୍ତବ୍ୟ ଥାଏ ତାହା ଲେଖ ।

II. ନିମ୍ନୋଦ୍ଧିତ କବିତାରେ ଯେଉଁ ବ୍ୟକ୍ତି ମାନଙ୍କର ନାମୋଲ୍ଲେଖ ହୋଇଅଛି ସେମାନଙ୍କର ପରସ୍ପରର ସମ୍ବନ୍ଧ ବୁଝାଇ ଲେଖ ।

ବୈଶମ୍ପାୟନ ବୋଇଲେ ଜନ୍ମେଜୟ,
ଏ ଅନ୍ତେ ଯାହା ହେଲା କହିବା ମନ ଦିଅ ।
ଅଭିମନ୍ୟୁ ବିଭା ସାରି ପାଞ୍ଚ ଭାଇ,
ଉପପ୍ଲବ ଗଡ଼ରେ ଚାରି ଦିନ ରହି ।
ଯୁଣି ବିରାଟଙ୍କୁ ଦେଖିବା ଇଚ୍ଛା କଲେ,
ଯୁଧିଷ୍ଠିର ବିରାଟ ପୁରକୁ ବାହାରିଲେ ।
ଆଗ ହୋଇ ବିରାଟ ନୃପତିଙ୍କ କଡ଼,
ବସିଥିଲେ ରେବତୀ ପତି ଶିରୀ ପତି ।
ଦ୍ରୁପଦ ମଧ୍ୟ ପୁତ୍ର ମାନଙ୍କର ତୁଲେ,
ବିରାଟଙ୍କ ସଭା ମଧ୍ୟେ ବସି ଥିଲେ ।
ଦ୍ରୁପଦଙ୍କୁ ଲାଗି ପ୍ରଦ୍ୟୁମ୍ନ ସାତ୍ୟକି,
ଏଦୁହେଁ ବସିଥିଲେ ଫୁଲାଇ ଛାତିକି ।
ଏହି ସମୟରେ ପାଣ୍ଡବ ପାଞ୍ଚ ଭାଇ,
ପରବେଶ ହେଲେ ସେ ସଭାରେ ଯାଇ ।

III. ନିମ୍ନଲିଖିତ କବିତାମାନଙ୍କର ବିଶଦ ବ୍ୟାଖ୍ୟା ଲେଖ ।

(କ) ଜାଣିଲେ ସୁଯୋଧନ ଭଲ ମନ୍ଦ କଥା,
ଆଚରିବା ଆମ୍ଭେ ବାଡ଼ିକରି ଯୋଥା ।

(ଖ) କାପୁରୁଷ ଶୂର ହୋଇତ ଲୋକେନ୍ଦ୍ର,
ତହିଁକି ଅନୁରୂପ ଯୁକ୍ତି କରି ଥାନ୍ତି ।

(ଗ) ଜଗତରେ ବଳ ଥାଉ ନୃତ ପଣ କରି,
ଯିବାର ଶୁଣା ଅଛି କହୁତ କାହାରି ।

(ଘ) ଧର୍ମ ଯୁକ୍ତ ବଚନ କହିଣ ଯୋଦ୍ଧା କୁଳ,
ମନ ତାଙ୍କଠାରୁ କରିଅ ଆବଳ ।
ତୁମ୍ଭ ବାଣି ଘନକୁ ଯୁରିବ ପବନ,
ବିଚୁର ହୋଇ ବଡାଇବେ ତା ବହନ ।
ଭୀଷ୍ମ ଦ୍ରୋଣ କୃପ ଗିରିକି ଯୋଡ଼ାଇ,
ଦିଅ ସେହି ଘନରେ କହୁଅଛି ମୁହିଁ ।
ଏହି ସକାଶରୁ ଦୁର୍ଯ୍ୟୋଧନ ବୁଝି,
ହୋଇ ନିଜ ବସିବ ବିଚାରକୁ ଯୋଗି ।

IV. ନିମ୍ନୋଦ୍ଧୃତ କବିତାମାନଙ୍କର ଅର୍ଥବୋଧାଉ ଓଡ଼ିଆ ବ୍ୟାଖ୍ୟାର ଆବଶ୍ୟକ ତାହା କର ।

(କ) ଶକୁନି ଅନାୟାସେ ପକାଇ କାଠିଟି,
ପାଣ୍ଡବଙ୍କ ଧନ ଯାକ କଲା ଲୁଟି ।

(ଖ) ଶୁକ୍ର ବୃହସ୍ପତି ସମାନ ତୁମ୍ଭ ମତି,
ଏଣୁ ସବୁ କଥା ହୋଇଛି ବିଦିତ ।

V (କ) ନିମ୍ନଲିଖିତ ଶବ୍ଦମାନେ କେଉଁ ସଂସ୍କୃତ ଶବ୍ଦମାନଙ୍କରୁ-ଉତ୍ପନ୍ନ ?

ପେସ, ଅବା, ପଗ୍ଧରନ୍ତି, ସରଧା, ତୁନ, ଘେନବେ
ଯୁଝିଲେ, ନାହା, ସାଇଁ ।

(ଖ) "ସେଥି ପାଁଇ କୁରୁଙ୍କୁ ଯୁଝିଲେ ଆମ୍ଭେମାନେ"
ଏଥିରେ ସାଧାରଣ ବ୍ୟବହାର ବିରୁଦ୍ଧ ପଦପ୍ରୟୋଗ ଥିଲେ ଦେଖାଅ ।

(ଗ) ଦ୍ରୁପଦ ବୋଇଲେ ହେ ପାଣ୍ଡବେ ନ ଯୁଝିଲେ,
ଦୁର୍ଯ୍ୟୋଧନ ଗ୍ରକ୍ୟ ଦେଇ ନାହିଁ ଭଲେ ।
ଏଠାରେ ଦେଇ କ୍ରିୟା କେଉଁ କାଳ ବୋଧକ ବୋଲି ବ୍ୟବହୃତ ହୋଇଅଛି ? ଏହାର ଶୁଦ୍ଧ ରୂପ କିପରି ହେବ ?

(ଘ) "ପାଣ୍ଡବଙ୍କ ଘରକୁ କୁରୁଏ ଯାଇ ଆପେ,
ଜଣି ଥିଲେ କିପାଁଇ ପଡନ୍ତାଇଁ ତାପେ ।"
ଏଠାରେ ପଡ଼ନ୍ତାଇଁ କେଉଁ ପୁରୁଷରର କ୍ରିୟା? ଏହାର କର୍ତ୍ତା କିଏ ?

VI (କ) "ଏବେ ବୁଇ କୁଳର ଇହ୍ନବ ମହ୍ନବ,
ଏଥିକି ଯେ ବିରୁର ତହ୍ନିକ ଦେଇ ଚିତ୍ତ ।"
ଏହାକୁ ସମ୍ପୂର୍ଣ୍ଣ ବାକ୍ୟ କୁହା ଯାଇ ପାରେ କି ନାହିଁ ? ଏହାର କିରୂପ ପରିବର୍ତ୍ତନ କଲେ ସହଜରେ ଏହା ପୂର୍ଣ୍ଣ ବାକ୍ୟ ହୋଇ ପାରେ ?

(ଖ) ନିକ, ସିନା, ତ, ନ, ଏପରିମାନଙ୍କୁ ବ୍ୟବହାର କରି ବାକ୍ୟ ରଚନା କର ।

(ଗ) "ଏଣୁ ଭାଇ ବାତ୍ସଲ୍ୟ ନ ପାରନ୍ତି ମୂର୍ଚ୍ଛି ।" ଏଠାରେ ମୂର୍ଚ୍ଛି ଶବ୍ଦର କି ଅର୍ଥ ? ସଚରାଚର କଥା ବାର୍ତ୍ତାରେ ଏହାର ପ୍ରୟୋଗ କିପରି ହୁଏ ତାହା ଦୃଷ୍ଟାନ୍ତଦ୍ୱାରା ବୁଝାଇ ଦିଅ ।

(ଘ) ନିମ୍ନବର୍ତ୍ତ ପଦମାନଙ୍କର ଅର୍ଥ ଲେଖ:—

ବାବାନଳ, ଲୁଚ୍, ଅଙ୍ଗରକ, ଅଚନୁ, ଯମଶସ୍ତ୍ର, ରାଜ୍ୟ-ସ୍ଥଧ, ବହ୍ନନ, ଗାଣ୍ଡୀବ, ଗହ୍ନଣ, ପୋଟାଳି, ଲକ୍ଷ୍ମୁକ, ଭଗ୍ଗଠିଣ, ଅପଘନ, କୃଷ୍ଣପଙ୍ଖା, ଗ୍ରେଣ୍ଡ ଓ ଗୁପ୍ତଦ୍ୱାର ।

VII. ଶରୀରସ୍ଥ ରକ୍ତ ସଞ୍ଚାଳନ କ୍ରିୟା ଏବଂ ଦୂଷିତ ଜଳ ବିଶୋଧନର ସହଜ ଉପାୟ ବର୍ଣ୍ଣନା କର ।

VIII. ଅଦ୍ଭୁତବାଦ ଏବଂ ଉଦ୍ଯୋଗ ଏହି ଦୁଇ ବିଷୟରେ ବିଭ୍ରାଶ ସିଂହାସନରେ ଯାହା ପଢ଼ି ଅଛ ତାହାର ସଂକ୍ଷିପ୍ତ ବିବରଣ ଲେଖ ।

WEDNESDAY, JANUARY 21ST, 12 TO 2 P.M.

URIYA—TRANSLATION.

I. ନିମ୍ନ-ଲିଖିତ ଗଦ୍ୟମାନ ଇଂରାଜିରେ ଅନୁବାଦ କର ।

(କ) ସେ ବୀରବିକ୍ରମଦେବ ରାଜା ଅମୃତ ଯୋଜନ ଆସନ୍ତେ ସେ ଶାଳବାହନ ରାଜାର ଦୁଇ ଲୋକ ଆସି ମାଗିଲେ । ବୋଇଲେ ଭୋଦେବ ତୁମ୍ଭକୁ ଯେଉଁ ଅମୃତ ବାସୁକି ନାଗ ଦେଇଅଛନ୍ତି ତାହା ଆମ୍ଭଙ୍କୁ ଦିଅ । ସେ ଦୁଇ ଲୋକେ ଏରୂପେ କହନ୍ତେ ରାଜା ବୀରବିକ୍ରମଦେବ ପଚାରିଲେ । ତୁମ୍ଭେ କାହାର ଲୋକ । ସେ କହିଲେ ଆମ୍ଭେ ଶାଳବାହନ ଗୃହ ଲୋକ । ଆମ୍ଭଙ୍କୁ ରାଜା ପଠାଇ ଅଛନ୍ତି । ସେ ଲୋକଙ୍କର ଏମନ୍ତ କଥା ଶୁଣି ସେ ରାଜା ବଚାରିଲେ ଆମ୍ଭେଙ୍କ ପ୍ରାର୍ଥନା ଭଙ୍ଗ ନୋ-ହିବା । ଏ ଶାଳବାହନ ଲୋକ ଯେବେ ମାଗିଲା ଏହାକୁ ଏ ଅମୃତ ଦେବା । ଏମନ୍ତ ବୋଲି ସେ ବିଷନାଶନ ଅମୃତ ଶାଳବାହନ ଲୋକକୁ ଦେଲେ । ସେ ଶାଳ-ବାହନ ସେ ଅମୃତ ଦେଖି ବୀରବିକ୍ରମଦେବଙ୍କୁ ବହୁତ

ପ୍ରଶଂସା କଲା । ପୁଣି ସେ ଶାଲବାହନର ସମସ୍ତ ଲୋକେ ବୋଲୁଅଛନ୍ତି । ନିଶ୍ଚୟ ଜାଣି ହୋଇଲା ବୀରବିକ୍ରମଦେବ ସମାନେ ଆଉ ଦ୍ୱାମ ନାହିଁ । କେ ଅଛି କାହାକୁ ସମାନ କରିବା । ଦେଖ ବାସୁକିନାଗ ସନ୍ତୋଷ ହୋଇ ଯେଉଁ ବିଷନାଶନ ଅମୃତ ଦେଲେ । ତାହା ଆଣନ୍ତେ ଶତ୍ରୁପକ୍ଷର ଯେଉଁ ଦୁଇ ଜଣ ମାଗିଲେ ତାହାଙ୍କୁ ଅମୃତ ଦେଲେ । ଆପଣା ସୈନ୍ୟର ସର୍ପାଘାତ ମନେ ନ ଯେଉଁଲେ । ଏଣୁକରି ବୀରବିକ୍ରମଦେବ ସମାନେ ଆଉ ରାଜା ନାହିଁ । ଏମନ୍ତ ବୋଲି ପ୍ରଶଂସା କଲେ । ତଦନନ୍ତର ଶାଲବାହନ ଆସି ସମସ୍ତ ସୈନ୍ୟ ଛାଡି ବୀରବିକ୍ରମଦେବଙ୍କୁ ଭେଟିଲେ ।

(ଖ) ପୃଥିବୀ ମଧ୍ୟରେ ୟୁରୋପୀୟ ଜାତିମାନେ ବଳିୟାନ ବୋଲି ଗଣ୍ୟ ଅଟନ୍ତି । ଏମାନେ ସ୍ଥଳ ବିହାରୀ ହୋଇ କେବଳ ଯେ ସ୍ଥଳରେ ଆପଣାର ଆଧିପତ୍ୟ ପ୍ରକାଶ କରିଅଛନ୍ତି ଏମନ୍ତନୁହେ-ଜଳରେ ମଧ୍ୟ ଆପଣାର କ୍ଷମତା ପ୍ରକାଶ କରିଅଛନ୍ତି । ସ୍ଥଳଖଣ୍ଡ ରକ୍ଷା କରିବା କାରଣରେ ଯେମନ୍ତ ଅସଂଖ୍ୟ ନିରସେନା ବିଦ୍ୟମାନ ରହିଅଛନ୍ତି, ଜଳଖଣ୍ଡ ରକ୍ଷା କରିବା ନିମନ୍ତେ ଅସଂଖ୍ୟ ସାମରିକ ଜଳଯାନ ବର୍ତ୍ତମାନ ରହିଅଛନ୍ତି । ଆଗ୍ନେୟନୌକା ଏହି ସାମରିକ ଜଳଯାନର ଅଂଶବିଶେଷ । ଏହି ଊନବିଂଶତି ଶତାବ୍ଦୀରେ ଏହି ଆଗ୍ନେୟ ନୌକାର ଉତ୍ପତ୍ତି ହୋଇଅଛି । ଜଳଯୁଦ୍ଧରେ ଏହାର ଆଦର ଏତେ ବଢ଼ିଅଛି ଯେ ପ୍ରତ୍ୟେକ ୟୁରୋପୀୟ ଜାତି ଏହାର ସଂଖ୍ୟା ବୃଦ୍ଧି କରିବାରେ ବ୍ୟସ୍ତ ହୋଇଅଛନ୍ତି । ଏମନ୍ତ କି ଇଂଲଣ୍ଡ ବାସିମାନେ ଆପଣାର ଆଗ୍ନେୟ ନୌକାର ସଂଖ୍ୟାରେ ଅତ୍ୟନ୍ତ ଅସନ୍ତୁଷ୍ଟ ହୋଇ

ତାହାର ସଂଖ୍ୟା ବୃଦ୍ଧି କରିବା ନିମିତ୍ତ ଗବର୍ଣ୍ଣମେଣ୍ଟଙ୍କୁ ବାରମ୍ବାର ଅନୁରୋଧ କରିଅଛନ୍ତି ।

(ଗ) ସଂସାରରେ ଯେତେ ପ୍ରକାର ରୋଗ ଅଛି, ତାହାର ଅଧିକାଂଶ ଅତିଭୋଜନ ବା ଅନୁପଯୁକ୍ତ ଦ୍ରବ୍ୟ ଭୋଜନରୁ ଉତ୍ପନ୍ନ ହୁଏ । ଅଜୀର୍ଣ୍ଣ ଦୋଷରୁ, ଜ୍ୱର, ଶୂଳ, ରକ୍ତାତିସାର, ଯକୃଦ୍ଦୋଷ, ମସ୍ତିଷ୍କର ପୀଡ଼ା, କାଶ, ଶ୍ୱାସ ପ୍ରଭୃତି ରୋଗ ହୋଇ ଯେ କେତେ ଲୋକଙ୍କର ଅଶେଷ କ୍ଲେଶ ଓ ଅକାଳ ମୃତ୍ୟୁ ଘଟୁଅଛି ତାହା ସଂଖ୍ୟା କରି ଯାଇ ନ ପାରେ । କିପରି ନିୟମରେ ଭୋଜନ କରିବାର ଉଚିତ ବର୍ତ୍ତମାନ ସେହି ବିଷୟର ବିବେଚନାରେ ପ୍ରବୃତ୍ତ ହେଲୁଁ ।

(ଘ) ଏକ୍ଷଣେ ଏହି ଦେଶର ଅନେକ ଲୋକେ ଆଉ ଜଳପାନ କରି ପରିତୃପ୍ତ ହୁଅନ୍ତି ନାହିଁ । ଇଂରାଜ ଜାତିର ସଂସର୍ଗ-ଦୋଷରୁ ସେମାନେ ସୁରାସକ୍ତ ହୋଇଅଛନ୍ତି । ଯେଉଁ ସମସ୍ତ ମହାଗୁଣ ଦ୍ୱାରା ଇଂରାଜମାନେ ଅନ୍ୟାନ୍ୟଜାତି ଅପେକ୍ଷା ଶ୍ରେଷ୍ଠତମ ହୋଇଅଛନ୍ତି, ଯାହାର ପ୍ରଭାବେ ସେମାନେ ପୃଥିବୀର ସକଳ ସ୍ଥାନରେ ମାନନୀୟ ହୋଇଅଛନ୍ତି, ସେହି ସକଳର ଅନୁକରଣରେ ଅସମର୍ଥ ହୋଇ ଅନେକ ଲୋକେ ସେମାନଙ୍କର ଜଘନ୍ୟ ସୁରାସକ୍ତିର ଅନୁକାରୀ ହୋଇଅଛନ୍ତି । ସୁରାପାନରେ ଇଂଲଣ୍ଡର ଯେଉଁ ସକଳ ମହାନିଷ୍ଟ ହୋଇଅଛି ଓ ହୋଉଅଛି ତାହାର ବିବରଣ ପାଠ କରି ମଧ୍ୟ ସେମାନେ ତହିଁରୁ ପରାଙ୍ମୁଖ ହେଉ ନାହାନ୍ତି ।

II Translate into Uriya [See Urdu Translation Paper].

M A DEGREE EXAMINATION, 1885

MONDAY, 19TH JANUARY, 10 A M TO 1 P M

ENGLISH LANGUAGE AND LITERATURE

Chaucer's *Troilus and Creseide*; Shakspere's *Troilus and Cressida* and *Much Ado about Nothing*, Ben Jonson's *Every Man in his Humour*

I By what writers prior to Chaucer is the story of Troilus and Cressida told?

Which of them first makes her a widow? Why?

Whose creation is Pandarus?

What Homeric name is Cressida a corruption of?

II (*a*) Modernise without needless change—

(1) Thou shalt ben the beste post, I leve,
Of all his lay

(2) Elde daunteth daunger at the last

(3) And every wight gan wexen for axis
A leche anon

(4) If thou n'ilte, wite all thyself the care,
On me is nought along thine evil fare

(5) Dredelesse it clear was in the wind
Of every pie and every let-game

(6) A man may all betimes his necke bede
When it shall off

(*b*) Translate into Chaucer's English, using his orthography and avoiding modern phraseology as much as possible—

(1) This is certainly not the shortest way to win her love.

(2) You look at me so steadfastly

(3) Much the hotter are the burning coals which are covered with ashes

(4) It rained very heavily.

(5) Rise quickly that she may not find you thus drowned in tears, unless you will have her go mad.

(6) He did not make half the ado.

(*c*) Give the meaning of—

(1) *Fremed, titering, met, frote, loos, fawe, mansute, rouken, enteched, potent.*

(2) *Word and end; I to borrow, No force; Make it to tough; From hasel wood.*

III (*a*) Write short notes on the following points of Chaucer's grammar:—

(1) Case endings of nouns other than—es,

(2) The relative pronoun,

(3) The indefinite pronoun,

(4) The imperative.

(*b*) Why is the Chaucerian stanza called Rhyme Royal? Give its rhyme formula.

Scan—

(1) He wext of his wo, as who saith, untormented

(2) But if he n'ill take of it no cure

(3) When that it cometh, but wilfully it weiven.

IV (1) A touch of female vanity appears in one of Creseide's soliloquies. Cite it.

(2) Creseide was only won, says M Stapfer, by a treacherous plot. Quote a speech of Creseide herself which disproves this.

(3) Give the substance of Troilus's reflections on *free choice, purveyance,* and *destiny.*

(4) Who opposes the exchange of Creseide, and on what ground?

V (*a*) What great anachronism runs through the whole of both Chaucer's tale and Shakspere's play of Troilus and Cressida?

Point out two anachronisms of a more particular kind in each.

(*b*) Account for the medieval sympathy with Troy. How does it appear in Shakspere's play? A vestige of it is seen in a speech of Cob in Jonson's *Every Man in his Humour*. Quote it.

(*c*) From what sources did Shakspere derive his materials for the scenes in which Hector and Achilles bear the chief part?

(*d*) How are the obvious faults of the play accounted for by (1) Dryden, (2) Stevens, (3) Verplanck?

(*e*) What views are held by Coleridge and Ulrici as to Shakspere's aim in this play?

What discreditable motive is suggested by Furnival?

VI. (*a*) Contrast Shakspere's Cressida with Chaucer's.

(*b*) Give in a few brief sentences the drift of Ulysses's long speeches to Agamemnon and Achilles.

VII. Explain, quoting the context where necessary—

(1) She has the mends in her own hand.

(2) You are in a state of grace.

(3) To Achilles!—to Ajax!—to!

(4) One touch of nature makes the whole world kin.

How is the last line commonly misinterpreted?

VIII. (*a*) Criticise the plot of *Much Ado about Nothing*.

(*b*) What is the fundamental idea of the play? How is it exemplified in Beatrice and Dogberry?

(*c*) By what expedient does Shakspere mitigate the painful effect of the tragic scene?

(*d*) What inference does Schlegel draw from the invariable direction' which Beatrice's wit takes?

IX. Briefly annotate—

(1) I will even take sixpence in earnest of the bear-herd and lead his apes into hell.

(2) Do you play the flouting Jack to tell us that Cupid is a good hare-finder and Vulcan a carpenter?

(3) God save the foundation.

(4) Dost thou not suspect my years?

X. (*a*) Give Jonson's definition of humour. Where does Shakspere hold up the abuse of the word to ridicule?

(*b*) Discuss the question whether there is an allusion to Shakspere in the prologue to *Every Man in his Humour*.

(*c*) Give the characteristics of Justice Clement and Matthew.

(*d*) Trace the part taken by Brainworm in the fifth act.

XI. (*a*) By whom and in what context are the following lines spoken?

(1) I termed it so for my more grace.

(2) He has not so much as a good phrase in his belly, but all old iron and rusty proverbs.

(3) The varlet is a tall man, afore heaven!

(4) I had lost a sheep an he had not bleated

Quote two of the rusty proverbs referred to in quotation (2).

(*b*) Explain—

(1) She hath me in the wind.

(2) I have eggs on the spit.

(3) You will be begged for a concealment.

(4) He claps his dish at the wrong man's door

XII. Refer to passages in your text-books parallel to the following in thought or expression:—

(1) Ye valleys low, where the mild whispers use
Of shades and wanton winds and gushing brooks.
—*Lycidas.*

(2) When the sea is calm, all boats alike

(3) Show mastership in floating.

(4) I shall be loved when I am lacked—*Coriolanus.*

We thank you both; yet one but flatters us
As well appeareth by the cause you come—
Richard II

(5) Will all great Neptune's ocean wash this blood
Clean from my hand?—*Macbeth.*

MONDAY, 19TH JANUARY, 2 TO 5 P.M.

ENGLISH LANGUAGE AND LITERATURE.

Dryden's *Hind and Panther*; Wordsworth's *Excursion I and II*; Shelley's *Alastor*.

I. Why was the 'Hind and the Panther' written? What does Dryden say about the three parts of the poem?

II. Annotate the following passages:—

(*a*) "What though your native kennel still be small
Bounded betwixt a puddle and a wall."

(*b*) "And kind as kings upon their coronation day."

(*c*) "With the self-same throw,
To catch the quarry and the vermin too.—"

(*d*) "As when the cause goes hard, the guilty man
Excepts, and thins his jury all he can."

(*e*) "Thus would your Polish diet disagree,
And end as it began, in anarchy."

(*f*) "But when Curtana will not do the deed,
You lay that pointless clergy-weapon by"

(*g*) "Some German quarrel, or, as times go now,
Some French, where force is uppermost, will do."

(*h*) "Unpitied Hudibras, your champion friend,
Has shown how far your charities extend."

(*i*) "Large limbed, stout-hearted, but of stupid mind,
(For Swisses or for Gibeonites designed.)"

(*j*) "He sowed the serpent's teeth, an iron harvest rose."

III. Explain the following words:—bilander; dorp; hattered; palliard; phylactery; spoom

IV. What two fables occur in the Hind and the Panther?

Give in your own language the one that comes first, with a short explanation of its meaning..

V. In Alastor some words are quoted from another poem; what are they? From what poem are they taken? Who wrote it?

VI. Relate the vision which the hero of Alastor saw in the vale of Cashmire.

VII. Write such notes as you think necessary on the following passages —

(a) "Does the bright arch of rainbow clouds,
And pendent mountains seen in the calm lake,
Lead only to a black and watery depth,
While death's blue vault, with loathliest vapours hung,
Where every shade which the foul grave exhales
Hides its dead eye from the detested day,
Conduct, O Sleep to thy delightful realms?"

(b) "On every side now rose
Peaks, which in unimaginable forms,
Lifted their black and barren pinnacles
In the light of evening and its precipice
Obscuring the ravine, disclosed above,
'Mid toppling stones, black gulphs, and yawning caves,
Whose windings gave ten thousand various tongues
To the loud stream"

(c) 'Even as a vapour fed with golden beams
That ministered on sunlight, ere the west
Eclipses it, was now that wondrous frame,—
No sense, no motion, no divinity,—
A fragile lute, on whose harmonious strings
The breath of heaven did wander,—a bright stream
Once fed with many-voiced waves,—a dream
Of youth, which night and time have quenched for ever,
Still, dark, and dry, and unremembered now"

What are the comments of Mr Forman Buxton, Mr Rossetti, and Mr Swinburne on (b) and of Mr Forman Buxton and Mr Rossetti on (c)?

VIII What were the occupations of the Wanderer from his sixth year until he adopted the profession of his manhood? What books did he read? How did they affect his mind?

IX In what context do the following lines occur?—

(a) "To him appeal was made as to a judge!"

(b) "An ordinary sorrow of Man's life"

(c) "The careless stillness of a thinking mind
Self-occupied."

(d) "And whistled many a snatch of merry tunes."

(e) "He coloured objects to his own desire
As with a Lover's passion."

(f) "The keen, the wholesome air of poverty."

(g) "The vision and the faculty divine."

(h) "A fall of voice
Regretted like the Nightingale's last note'

X. Write an argument for Book II of the Excursion.

XI. Tell in your own words the story of Margaret.

TUESDAY, 20TH JANUARY, 10 A.M TO 1 P.M.

ENGLISH LANGUAGE AND LITERATURE.

De Quincey's *Rhetoric and Style*; Johnson's *Life of Pope*; History of the Language and Literature during the Fifteenth to the Eighteenth Centuries.

I. Give briefly the substance of De Quincey's remarks on French Rhetoric. What does he say of German, Grecian, and Roman Rhetoric?

II. Who is "the first very eminent rhetorician in English literature"? Give the substance of De Quincey's remarks on him. Name four other great rhetoricians, and give De Quincey's remarks on them.

III. Why, according to De Quincey, do lawyers fail as public speakers in the House of Commons?

IV. What comparison does De Quincey make between Grecian literature and that of the middle ages? What agencies produced the analogy?

V. (a) "Undoubtedly he had a turgid style of mouthy grandiloquence." Who?

(b) How does De Quincey distinguish Eloquence from Rhetoric?

(c) What was it that "first produced into this world that celebrated thing called *Prose*"?

(*d*) "This accomplished nobleman...wrote with the ease and careless grace of a high-bred gentleman...." Who?

(*e*) What does De Quincey tax as 'undignified' in the Greek prose style?

(*f*) What adjective does De Quincey apply to Gibbon?

(*g*) "He came back to Greece with a twofold freight of treasures." Who was this? What were the two treasures?

(*h*) Give three reasons why "in itself metre must always have been the earliest vehicle for public enunciations of truth"?

(*i*) Give the names omitted in the three following passages:—

(i) "Had —— pulled out, like caoutchouc or Indian rubber, a little longer, he might have seen the silver shields, or Macedonian life-guards, embarking for Persia."

(ii) "On the Tory side —— (——) was the most accomplished person in the House."

(iii) This is astonishing; for no one was better aware than —— of the distinction between the *discursive* and *intuitive* acts of the mind.'

VI. How are the following dates and names connected with Pope?—1709, 1713, 1735; Binfield, Caryl, Curll, Sir W. Trumbal, Twickenham, Walsh.

VII. Give the substance of Dr Johnson's Criticism on the Epistle of Eloisa to Abelard, and the Essay on Criticism.

VIII. Give the dates of the following events:—Pope's birth and death; Dryden's death; the beginning and ending of the translation of the Iliad; publication of the first part of the Essay on Man.

IX. Give the substance of Dr. Johnson's comparison (1) of Pope with Dryden as regards "acquired knowledge" and "prose"; and (2) of Pope's Iliad with Homer's Iliad.

X. (*a*) Write a short account of the English Drama and of its progress up to the time of Shakspeare.

(*b*) Enumerate the main differences between the dramas of the Elizabethan age and those of the period of the Restoration.

(*c*) Name the four whom you regard as the chief lyrical poets of the eighteenth century and one or two of the most famous poems of each. Quote any *one* of the lyrics you have mentioned, or give an account of it sufficiently minute to show your intimate acquaintance with it.

XI. Write short notes on the life, works, and place in or influence upon English literature of each of the following:—*The Earl of Surrey, Roger Ascham, George Herbert, Sir Thomas Browne, Samuel Butler, Samuel Pepys, Viscount Bolingbroke,* and *Daniel Defoe.*

XII. English spelling is said to have been largely affected at one time, and to be somewhat affected still by the fact that "the followers of Caxton were for nearly two centuries principally mere handicraftsmen, and that typography in England fell far short both of the dignity and the artistic perfection to which it elsewhere attained immediately after its invention." Discuss and illustrate this.

TUESDAY, 20TH JANUARY, 2 TO 5 P.M.

ENGLISH LANGUAGE AND LITERATURE.

Coleridge's *Biographia Literaria, I—XIII*; Carlyle's *French Revolution, Vol. I.*

I. Who are the 'Mystics,' mentioned by Coleridge? What debt did he owe to their writings?

II. How are the following names connected with Coleridge?—Bowyer, Bowles, Quantock, Tychsen, Wedgewood.

III. Prove that you know—

(*a*) the distinction which Coleridge made between 'Imagination' and 'Fancy.'

(*b*) that De Quincey and Coleridge attached different meanings to the word 'probable.'

(*c*) the meaning Coleridge gave to the words 'objective, and 'subjective.'

(*d*) Coleridge's definition of 'pedantry' and 'philosophy' and 'veracity.'

IV. What are the defects of Schelling's philosophy?

V. Who was the Sage of Koenigsberg? What, according to Coleridge, are the characteristics of his writings? What four of his works are specially mentioned by Coleridge?

VI. What considerations led Coleridge to say that "in all perplexity there is a portion of fear which predisposes the mind to anger"?

VII. Show your acquaintance with Coleridge's remarks on the defects of ordinary literary criticism.

VIII. Show briefly that you know who or what the following were.—Affair of Nanci, Assignat, Beaumarchais, Bouillé, Calonne, D'Agoust, Jean Claude Jacot, Lecointre, Malseigne, Miomandre, Notables, States General.

IX. Show your acquaintance with the chapters headed—
(*a*) 'Symbolic';
(*b*) 'Storm and Victory,' *or* 'Death of Mirabeau.'

X. (*a*) How did Camille Desmoulins first come into public view?
(*b*) What was the Session of the Tennis Court, and what led to it?
(*c*) What was the origin of the TRICOLOR?
(*d*) Whom does Carlyle call 'Sea green,' 'Scipio Americanus,' and 'Barrel'?

XI. (*a*) What mention is made of Napoleon Buonaparte in the French Revolution?
(*b*) What happened on the following dates?—10th May 1774, 6th October 1789, 4th February 1790?

XII. Write brief notes to show that you understand the following passages:—
(*a*) "The Bakers' shops have got their queues or Tails;"
(*b*) "These are the thrice-famed *Brigands*:"
(*c*) "So have these individuals (verily by black art) built them a Domdaniel, or enchanted Dubarrydom; call it an Armida-Palace,"
(*d*) "Lone as fanatic Anchorite in his Thebaid; say as far-seen Simon on his Pillar,"

(*e*) "He asks, with a delicate graciosity of manner covering unutterable things: 'whether it is a Bed of Justice, then, or a Royal Session?'"

(*f*) "The voice of the poor, through long years, ascends inarticulate, in *Jacqueries*."

XIII. Justify Carlyle's choice of the event with which he begins the French Revolution.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

ENGLISH PROSE COMPOSITION.

I. Compare Shakespeare and Ben Jonson, (*a*) as poets; (*b*) as dramatists.

II. Write an Essay on *one* of the four following subjects.—

(1) "Peace hath her victories
No less renowned than war."

(2) "The Child is Father of the man."

(3) Civil War.

(4) The effects produced on Hindus by contact with European civilisation.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

SANSKRIT: TRANSLATION.

I Translate into Sanskrit Anushtubh metre:

So having said, as one from sad dismay
Recomforted, and, after thoughts disturbed,
Submitting to what seemed remediless,
Thus, in calm mood, his words to Eve he turned.
"Bold deed thou hast presumed, adventurous Eve,
And peril great provoked, who thus hast dared,
Had it been only coveting to eye
That sacred fruit, sacred to abstinence,
Much more to taste it under ban to touch.
But past, who can recall, or done, undo?
Not God omnipotent, nor Fate, yet so
Perhaps thou shalt not die; perhaps the fact
Is not so heinous now; foretasted fruit,
Profaned first by the serpent, by him first

Made common, and unhallowed, ere our taste
Nor yet on him found deadly, he yet lives;
Lives, as thou saidst, and gains to live as man,
Higher degree of life; inducement strong
To us, as likely, tasting, to attain
Proportional ascent, which cannot be
But to be gods, or angels demi-gods
Nor can I think that God, Creator wise,
Though threatening, will in earnest so destroy
Us is prime creatures, dignified so high,
Set over all His works, which in our fall,
For us created, needs with us must fail
Dependent made; so God shall uncreate,
Be frustrate, do, undo, and labour lose"—(MILTON)

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M

TARKASAṄGRAHA AND TARKADĪPIKĀ

I. Explain the meaning and comment on the purport of the following passages:—

(a) मानव्यवहारासाधारणकारणं परिमाणं ।

(b) यस्य साध्याभावः प्रमाणान्तरेण निश्चितः स बाधितः ।

(c) त्रैकालिकसंसर्गावच्छिन्नप्रतियोगिकोऽत्यन्ताभावः ।

(d) मङ्गलं वेदबोधितकर्तव्यताकमलौकिकाविगीतशिष्टाचारविषयत्वाद्दर्शादिवत् ।

(e) शब्देतरोद्भूतविशेषगुणानाश्रयत्वे सति ज्ञानकारणमनस्संयोगाश्रयत्वमिन्द्रियत्वं ।

(f) हेतुसाध्ययोर्व्याप्तिरन्वयव्याप्तिस्तद्भावयो - र्व्याप्तिर्व्यतिरेकव्याप्तिः ।

(g) वायुः प्रत्यक्षः प्रत्यक्षस्पर्शाश्रयत्वादित्यत्र बहिर्द्रव्यत्वावच्छिन्नप्रत्यक्षत्वव्यापकमुद्भूतरूपवत्वं ।

(h) ज्ञानानां तद्वति तत्प्रकारकत्वं स्वतो ग्राह्यं परतो वेति विचार्यते। तत्र विप्रतिपत्तिर्ज्ञानप्रामाण्यं तद्प्रामाण्याग्राहकयावद्ज्ञानग्राहकसामग्रीग्राह्यं न वेति ।

II (a) What are अन्वयव्यभिचार and व्यतिरेकव्यभिचार ?

(b) To what Padārtha belong घटाभाव, घटाभावाभाव, घटनाशप्रागभाव, घटप्रागभावनाश, सुवर्ण, जतु and लता ?

(c) What is the Lakshana of मोक्ष, वाद, वितण्डा, कथा and विधि ?

(d) Why is there no Vyāvartakatva in व्यावृत्ति and अभिधेयत्व, and no Ātmatva in शरीर and इन्द्रिय ?

III (*a*) Name the seven Padarthas (Categories) and their subdivisions, enumerate the Avayavas, giving explanatory examples of them

(*b*) State where the *Nyaya* of Gautama differs from the *Vaiseshika* of Kanadā

(*c*) Compare the Indian systems of Logic with those of European philosophers studied by you

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THURSDAY, 22ND JANUARY, 2 TO 5 P M

SANSKRIT UTTARARĀMACARITRA, MRICCHAKATIKA, VIKRAMORVAŚĪ

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1 (*a*) Explain the Alankāra and Vyangya of the following —

दीनानां कल्पवृक्षः स्वगुणफलनतः सज्ज-
नानां कुटुम्बी
आदर्शः शिक्षितानां सुचरितनिकषः शी-
लवेलासमुद्रः ।
सत्कर्त्ता नावमन्ता पुरुषगुणनिधिर्दक्षिणो-
दारसत्त्वो
ह्येकः श्लाघ्यः स जीवत्यधिकगुणतया चो-
च्छ्वसन्तीव चान्ये ॥ —
व

अप्रीतिर्भवतु विमुच्यतां हि हासो
धिक्प्रीतिं परिभवकारिकामनार्य्याम् ।
मा भूच्च त्वयि मम संङ्गतं कदाचि-

दाच्छिन्नं धनुरिव निर्गुणं त्यजामि॥

गूढं नूपुरशब्दमात्रमपि मे कान्तं श्रुतौ पातयेत्

पश्चादेत्य शनैः करोत्पलवृते कुर्वीत वा लोचने।

हर्म्येऽस्मिन्नवतीर्य साध्वसवशान्मन्दायमाना बला-

दानीयेत पदात् पदं चतुरया सख्या ममोपान्तिकम्॥

सामाज्ञः पृथिवीभुजामधिपतिं नागाधिराजो भवान्

अव्युच्छिन्नपृथुप्रवृत्ति भवतो दानं समानं मम।

स्त्रीरत्नेषु मरुर्वशो प्रियतमा यूथे तवेयं वशा

सर्वं ममानु ते प्रियाविरहजां त्वन्तु व्यथां मानुभूः॥

एको रसः करुण एव निमित्तभेदा-

छिन्नः पृथक् पृथगिवाश्रयते विवर्तान् ।
आवर्तबुद्बुदतरङ्गमयान् विकारा-
नम्भो यथा सलिलमेव तु तत्समग्रम् ॥
न तेजस्तेजस्वी प्रसृतमपरेषां प्रसहते
स तस्य स्वो भावः प्रकृतिनियतत्वादकृतकः ।
मयूखैरश्रान्तं तपति यदि देवो दिनकरः
किमाग्नेयग्रावा निकृत इव तेजांसि वमति ।

(*b*) Explain the peculiarities of the Aprastutaprasamsā Samāsōkti, Lalita, Kārakadīpaka and Prēyas Alankāra; giving one example of each Alankāra from your text.

(*c*) State the most important varieties of the Samlakshyakramavyangya and of the Asamlakshyakramavyangya, and illustrate your answer by one example of each variety.

(*d*) Make grammatical remarks on the following expressions

ब्राह्मण, पन्नग, अप्राप्यतमम्, हुतभुजोः, केशपाशे, द्विपदिकया, कीदृशः, अद्वैतं, पराधीनं, आग्नेयग्रावा, ऐणेयत्वक्, कपिलफुल्लनेत्रत्रयं, तीर्णदग्धाब्धिलंकः.

(*e*) Quote in full the Ślokas beginning with उदयति हि-शशांक इत्यादि ; परिजनकथासक्त इत्यादि ; पिअम हि विओअ इत्यादि ; तरङ्गभ्रूभङ्गेत्यादि ; लीलोल्लो लत्तुभितेत्यादि and झणज्झणितकंकणेत्यादि.

II. (*a*) Turn into Sanskrit:

अहो सलिलसित्त - मज्जिद - हरिदीवलेवणस्स विविह - सुअंध - कुसुमोवहार-चित्तलिद, भूमिआभाअस्स गअणत्तलालोअण - कीदूहल-दूरुण्णामिद - सीसस्स दीलाअमाणावलंविदेरावण-हत्थ-ब्भमाइद-मल्लिआ - दाम - गुणालंकिदस्स समुच्छिद - दंतिदंत - तोरणावभासिदस्स माहारअणोवराअ-सोहिणा पवण बलंदोलण-ललंत-चञ्चलग्ग-हत्थेण इदो एहि त्ति वाहरंतेण विअ मं सोहग्ग-पडाआ-णिवहेणोवसोहिदस्स सस्सिरीअदा।

(*b*) Turn into Prākṛit:

आश्चर्यं भोः। इहापि पञ्चमे प्रकोष्ठे अयं दरिद्रजनलोभोत्पादनकरमाहरत्युपचितो हि ङ्गतैलगन्धः। विविधसुरभिधूमोद्गारैर्नित्यसन्तप्यमानं निश्वसितीव महानसं द्वारमुखैः। अधिकमुत्सुकायते मां साध्यमानबहुविधभक्ष्यभोजनगन्धः। अयमपरः पटच्चरमिव हतपशूदरपेशिं धावति रूपिदारकः।

(*c*) Explain the following Sūtras:

इदुतोः शसो णो and युधिबुध्योर्झः।

(*d*) Explain the more important Prākṛit Metres occurring in the Vikramōrvaśī.

III. (*a*) State the principal works on dramatic literature; enumerate the Rūpakas and Uparūpakas, describing their peculiarities.

(*b*) What is an Amukha, Pratimukha, Vishkambha, Praveśaka and Pāñcālīrīti?

(*c*) To what practices does the Nāndī in the Mṛicchakatika refer? State if any historical event underlies the Mṛicchakatika. Who are the Lōkapālas? What is the Gandhamādana? Who was Sagara? What is the Mangalagranthi?

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

SANSKRIT: RIG-VĒDA, I, 13—24.

I. (*a*) Translate into English:

कस्य नूनं कतमस्यामृतानां मनामहे चारु देवस्य नाम।

को नो मह्या अदितये पुनर्दात्पितरं च दृशेयं मातरं च ॥ १ ॥

अग्नेर्वयं प्रथमस्यामृतानां वनामहे चारु देवस्य नाम।

स नो मह्या अदितये पुनर्दात्पितरं च दृशेयं मातरं च ॥ २ ॥

अभि त्वा देव सवितरीशानं वार्याणां।

सदावन्भागमीमहे ॥ ३ ॥

यश्चिद्धि ते दत्या भगः शशमानः पुरा निदः ।
अद्वेषो हस्तयोर्दधे ॥ ४ ॥

भगभक्तस्य ते वयमुदशेम तवावसा ।
मूर्धानं राय आरभे ॥ ५ ॥

नहि ते क्षत्रं न सहो न मन्युं वयश्चनामी पतयंत आपुः ।
नेमा आपो अनिमिषं चरंतीर्न ये वातस्य प्रमिनंत्यभ्वं ॥ ६ ॥

अबुध्ने राजा वरुणो वनस्योर्ध्वं स्तूपं ददते पूतदक्षः ।
नीचीनाः स्थुरुपरि बुध्न एषामस्मे अंतर्निहिताः केतवः स्युः ॥ ७ ॥

उरुं हि राजा वरुणश्चकार सूर्याय पंथामन्वेतवा उ ।
अपदे पादा प्रतिधातवेऽकरुतापवक्ता हृदयाविधश्चित् ॥ ८ ॥

शतं ते राजन्भिषजः सहस्रमुर्वी गंभीरा सुमतिष्टे अस्तु ।

बाधस्व दूरे निर्ऋतिं पराचैः कृतं चिदेनः प्र मुमुग्ध्यस्मत् ॥ ९ ॥

अमी य ऋक्षा निहितास उच्चा नक्तं ददृश्रे कुह चिद्दिवेयुः ।

अदब्धानि वरुणस्य व्रतानि विचाकशच्चंद्रमा नक्तमेति ॥ १० ॥

तत्त्वा यामि ब्रह्मणा वंदमानस्तदा शास्ते यजमानो हविर्भिः ।

अहेळमानो वरुणेह बोध्युरुशंस मा न आयुः प्र मोषीः ॥ ११ ॥

तदिन्नक्तं तद्दिवा मह्यमाहुस्तदयं केतो हृद आ वि चष्टे ।

शुनःशेपो यमह्वदृभीतः सो अस्मान्राजा वरुणो मुमोक्तु ॥ १२ ॥

शुनःशेपो ह्यह्वद्गृभीतस्त्रिष्वादित्य द्रुपदे-
षु बद्धः ।
अवैनं राजा वरुणः ससृज्याद्विद्वाँ अदब्धो
वि मुमोक्तु पाशान् ॥ १३ ॥
अव ते हेलो वरुण नमोभिरव यज्ञेभि-
रीमहे हविर्भिः ।
क्षयन्नस्मभ्यमसुर प्रचेता राजन्नेनांसि शि-
श्रथः कृतानि ॥ १४ ॥
उदुत्तमं वरुण पाशमस्मदवाधमं वि
मध्यमं श्रथाय ।
अथा वयमादित्य व्रते तवानागसो
अदितये स्याम ॥ १५ ॥

(b) Explain the above underlined and the following expressions according to Grammar and meaning —

नक्तोषासा, नराशंसम्, वृक्तबर्हिषः, उषर्बुधः, द्रविणोदा, पोत्रात्, अग्रियः, मृलाते, चर्षणीनां, सोमपीतये, सिषक्तु, विपश्चितः, अनाधृष्टासः, सोम्य, रत्नधातमः, परिज्मानं, उशसि, अचिणः, वरूत्रीं, उशतीः, पृश्निमातरः and अपगलह.

(c) Write the 10th verse of the above in the Padapātha.

(d) Point out the peculiar Vedic expressions occurring in the above passage.

II. (a) Explain the metres contained in the twelve hymns specially studied by you.

(b) Accentuate and scan the following:—

अग्ने पत्नीरिहा वह देवानामुशतीरुप।

त्वष्टारं सोमपीतये ॥

III. (a) Give a short account of the Vedic literature.

(b) State the arrangement of the hymns in the Rig-vēda

(c) Mention the most important of the Vedic poets, and state the deities to whom the twelve hymns you have studied are dedicated.

(d) Fix the age of the Rig-vēda according to the evidence provided by the Vēda itself.

(e) Mention the people occurring in the Rig-vēda, and describe the different groups of the Aryan state during the Vedic period.

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

SANSKRIT: MANU, II, VII, AND VIII, DAŚAKUMĀRA-CHARITRA AND MĒGHADŪTA.

I. (a) Define the difference between Sruti and Smṛti; between Śrautasūtra and Dharmasūtra; between Śrautaprayōga and Smārtaprayōga.

(b) Mention the different subdivisions (kāṇḍas) of Dharma.

(c) Enumerate the most important Smṛitis, and state what special subjects are treated in sōme of them.

II. (a) State what is understood by ब्रह्मावर्त्त, मध्यदेश, आर्यावर्त्त, व्रात्याः, कर्मेन्द्रिय, शुक्त, परीवाद, निन्दा, व्यसनानि, दूत, मण्डल, चक्रवृद्धि, स्थानानि, दण्डस्य.

(b) Give the meaning of, and the allusions contained in, the following Ślōkas —

एतदक्षरमेतां च जपन् व्याहृतिपूर्विकां ।
सन्ध्ययोर्वेदविद्विप्रो वेदपुण्येन युज्यते ॥
ब्राह्मस्य जन्मनः कर्त्ता स्वधर्मस्य च शासिता ।
बालोऽपि विप्रो वृद्धस्य पिता भवति धर्मतः ॥
एषोऽनुपस्कृतः प्रोक्तो योधधर्मः सनातनः ।
अस्माद्धर्मान्न च्यवेत क्षत्रियो घ्नन् रणे रिपून् ॥
दण्डव्यूहेन तं मार्गं यायात् तु शकटेन वा ।
वराहमकराभ्यां वा सूच्या वा गरुडेन वा ॥
अभियोक्ता न चेद्ब्रूयाद्वध्यो दण्ड्यश्च धर्मतः ।
न चेत् त्रिपक्षात् प्रब्रूयाद्धर्मं प्रति पराजितः ॥
अस्वामिना कृतो यस्तु दायो विक्रिय एव वा ।
अकृतः स तु विज्ञेयो व्यवहारे यथा स्थितिः ॥

(c) Enumerate the 18 Titles of Law according to Manu.

(d) How should a Brāhman be saluted?

(e) Who cannot be a witness?

(f) How should a judge administer an oath?

(g) What punishments are inflicted on one who steals more than 50 palas, or cattle belonging to priests, or flowers, green corn and shrubs; in what proportion are such fines inflicted on Śūdras, Vaisyas, Kshatriyas and Brāhmanas?

(h) What persons cannot acquire property?

III. (*a*) Give the Alankāras and Vyangyas of :—

त्वामासारप्रशमितवनोपप्लवं साधु मूर्ध्ना
वक्ष्यत्यध्वश्रमपरिगतं सानुमानाम्रकूटः ।
न क्षुद्रोऽपि प्रथमसुकृतापेक्षया संश्रयाय
प्राप्ते मित्रे भवति विमुखः किं पुनर्यस्तथोच्चैः ॥
तस्याः पातुं सुरगज इव व्योम्नि पश्चार्द्धलम्बी
त्वञ्चेदच्छस्फटिकविशदं तर्कयेस्तिर्यगम्भः ।
संसर्पन्त्या सपदि भवतः स्रोतसि च्छाययासौ
स्यादस्यानोपगतयमुनासङ्गमेवाभिरामा ॥
रक्ताशोकश्चलकिशलयः केसरश्चात्र कान्तः
प्रत्यासन्नौ कुरवकवृतेर्माधवीमण्डपस्य ।
एकः सख्यास्तव सह मया वामपादाभिलाषी
काङ्क्षत्यन्यो वदनमदिरां दोहदच्छद्मनास्याः ॥

(*b*) Identify, by giving their modern names, Rāmagiri, Āmrakūta, Citrakūta, Dēvagiri, Dasapura, Avantī (mention its other three names), Rēvā and Sipra

(*c*) What are the names of the Dinnāgas? Enumerate the nine treasures (nidhi) of Kubēra.

(*d*) Mention the works generally ascribed to Kālidāsa, and the probable time of his life.

IV. (*a*) Give in Sanskrit the meaning of: विग्रहः सविग्रहः, आयुष्यान्तराये संपराये, आख्यानकाख्यायिके, परितच्यमाणान्, निरवेक्षि, लतान्तबाणलक्ष्यताम्,

आनायमानलावण्यं, पिच्छिकाभ्रमणेषु, अकल्यमन्थः अर्द्धोरुक, मन्दंशक, संक्रमीकृत्य, अपारयन्ती, वरिवस्याविधायिनी, संज्ञपितपशुना, मुष्टिवधः, घोषणास्थान; सपत्राकृतः and सूलाकृत्य.

(*b*) Who are Chandavarmā, Upahāravarmā, Kalpasundarī, Kāmamañjarī, Mitragupta, Visruta and Anantavarmā? Write short notices in Sanskrit about them.

(*c*) Mention some Sanskrit works similar to the Dasakumāracharitra, giving the names of their authors and their probable dates.

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

SANSKRIT COMPOSITION.

Caste-distinctions in India whether based originally on religious or political grounds, or both?

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

SANSKRIT INTO ENGLISH.

I Translate into English:

(*a*) तमोद्रव्यनैल्याद् घटवदितिमानेसमुदिते
यदीदंरूपिस्यात्किमपिनभवेत्स्पार्शनमपि।
इतीमंतर्कं सा विघटयितुमुद्युक्तमनसा
तमःपुञ्जंधत्तेकचभरभिषादिन्दुवदना ॥

(*b*) विचित्रमुच्चैःस्रवमानमारा-
त्कुतूहलंचस्रुतता ततस्य।

मेघात्ययोपात्तवनोपशोभं
कदम्बकंवातमजंमृगाणाम् ॥

(c) सितारविन्दप्रचयेषुलीनाः
संसक्तफेनेषुचसैकतेषु ।
कुन्दावदाताःकलहंममालाः
प्रतीयिरेश्रोत्रसुमुखैर्निनादैः ॥

(d) वैखानसेभ्यश्श्रुतरामवार्त्ता-
स्ततोविशिञ्जानपतत्रिसंघं ।
अभ्रंलिहाग्रविमार्गभङ्ग-
मानंहिरेद्रिंप्रतिचित्रकूटम् ॥

(e) घटोवामृत्पिण्डोप्यणुरपिचधूमोग्निरचलः
पटोवातन्तुर्वापरिहरतिकिंघोरशमनम् ।
वृथाकण्ठक्षोभंवहसितरसातर्कवचसा
पदाम्भोजंशम्भोर्भजपरमसौख्यंव्रजसुधीः ॥

(f) अतियजेतनिजांयदिदेवता-
मुभयतश्च्यवतेजुषतेप्यघम ।
क्षितिभृतैवसदैवतकावयं
वनवतानवताकिमहिद्रुहा ॥

(g) अनुरागवर्त्तिनीतवविरहेणीग्रेणसागृहीताङ्गी ।
त्रिपुररिपुणेवगौरीवरतनुरर्धावशिष्टेव ॥

(h) आस्तामकण्टकमिदंवसुधाधिपत्यं
त्रैलोक्यराज्यमपिनैवहृणायमन्ये।
निश्शंकसुप्तहरिणीकुलसंकुलासु
चेतःपरंवलतिशैलवनस्थलीषु ॥

(i) नार्हामिशुद्धमपिलोकविरुद्धकृत्यं
कर्तुंमयाद्यमहितोक्तिरियंतवार्हा।
आजानतोतिकुटिलेपिजनेमहान्त-
स्त्वारोपयन्तिहिगुणंधनुषीवशूराः ॥

(j) ब्राह्मणश्वपचभेदविचारः
प्रत्यगात्मनिकथंतवयुक्तः।
बिम्बितेम्बरमणौसुरनद्या-
मन्तरकिमपिचास्तिसुरायाम् ॥

(k) विद्यामवाप्यापिविमुक्तिपद्यां
जागर्त्तितुच्छाजनसङ्गहेच्छा।
अहोमहान्तोपिमहेन्द्रजाले
मज्जन्तिमायाविवरस्थतस्य ॥

(l) नपपातसन्निहितपक्ति-
सुरभिषुफलेषुमानसम्।
तस्यशुचिनिशिशिरेचपय-
स्यमृतायतेहिमुतपःसुकर्मणाम्॥

(m) नविसिस्मियेनविषसाद
मुङ्गरलसतान्नचाददे।
मत्चमुरुधृतिरजस्तमसी
नहतःस्मतस्यहतशक्तिपेशले॥

(n) उद्यद्द्रुमकान्तिभिःकिसलयैस्ताम्रांविषंबि-
भ्रतो
भृङ्गालीविरुतैःकलैरविशदव्याहारलीलाभृतः।
धूर्णन्तोमलयानिलाहतिचलैःशाखासमूहैर्मुहु
र्भ्रान्तिंप्राप्यमधुप्रसङ्गमधुनावान्तादृवामी-
द्रुमाः॥

(o) तेनतेनवचसैवमघोन-
स्सस्मवेदकपटंपदुरुच्चै।
आचरत्तदुचितामथवाणी-
मार्जवंहिकुटिलेषुननीतिः॥

(p) अजस्रमारोहमिदूरदीर्घं
संकल्पसोपानततिंतदीयां ।
श्वासान्सवर्णत्यधिकपुनर्य-
द्रूचानात्तवत्वन्मयतामवाप्य ॥

(q) लोलहेतिरमनाशतप्रभा-
मण्डलेन लसताहमन्निव ।
प्राज्यमाज्यममकृद्वपट्कृत-
न्निर्मलीमममलीढपावकः ॥

(r) निर्गतायाञ्च केयूरकेण सह पत्रलेखायां किं शीघ्रमेतयास्यन्तिनेत्यन्तरावागच्छतां विलम्ब उत्पतत्यतेनवेतिकियद्भिर्वादिवसैः परापतिष्यन्तीत्यनयैव चिन्तयाशून्यहृदयः क्षणमिव स्थित्वा स्कन्धावारवार्तास्फुटीकरणाय वार्ताहरंविसर्ज्य, बहुदिवसान्तरितदर्शनस्य वैशम्पायनस्य प्रत्युद्गमनायात्मानं मोचयितुपितुः पादमूलमगात् । तत्र चोभयतः ससम्भ्रमापसृतप्रतिहारमण्डलवितीर्णविस्तीर्णालोकनमार्गोद्दूरादुपसृत्य जानुकरतलावलम्बितविमलमणिकुट्टिमोदरसंक्रांतप्रतिमोद्विगुणायमानायतकुन्तलकलापः पितुः प्रणाममकरोत ।

(8) अहो युधिष्ठिर! युधिष्ठिर! अजातशत्रो! अमिथ्यावादिन् धर्म्मपुत्र! सानुजस्य ते किमनेनापकृतम्? अथवा किमनेनालोकप्रकृतिजिह्मचेतसा, अर्ज्जुन! सात्यकेबाहुशालिन्! वृकोदर! माधव! युक्तं नाम भवतां सुरासुरमनुजलोकैकधनुर्धरस्य द्विजन्मनः परिणतवयसः सर्वाचार्यस्य विशेषतो ममपितुरमुनाद्रुपदकुलकलंकेन मनुजपशुना स्पृश्यमानमुत्तमाङ्गमुपेक्षितुम् अथवा सर्व एवैते पातकिन. किमेतैः।

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

TRANSLATION FROM ENGLISH INTO LATIN.

Translate into Latin:

I. You will remember you were sent into Bithynia for the particular purpose of correcting those many abuses which it appeared necessary to reform. Now none stands more in need of reformation than that criminals, who have been sentenced to punishment, should not only be set at liberty (as your letter informs me) without any apparent authority, but even appointed to employments which ought alone to be exercised by persons whose characters are irreproachable. Those, therefore, among them who have been convicted within these ten years, and whose sentence has not been reversed by proper authority, must be sent back to their respective punishments; but where more than ten years have elapsed since their conviction, and they are grown old and infirm, let them be disposed of in such employments as are but few degrees removed from the punishments to which they where sentenced, that is, either to attend upon the public baths, cleanse the common shores, or repair the streets and highways; those being the offices to which such persons are usually sentenced.

II. And here we must not omit to notice the bravery of a veteran soldier of the fifth legion. For when an elephant which had been wounded in the left wing, and roused to fury by the pain, ran against an unarmed sutler, threw him under his feet, and kneeling on him with his whole weight, and brandishing his uplifted trunk, with hideous cries, crushed him to death, the soldier could not refrain from attacking the animal. The elephant, seeing him advance with his javelin in his hand, quitted the dead body of the sutler, and seizing him with his trunk, wheeled him round in the air. But he, amidst all the danger, preserving his presence of mind, ceased not with his sword to strike at the elephant's trunk, which enclasped him, and the animal, at last overcome with the pain, quitted the soldier and fled to the rest with hideous cries.

III. We ought, likewise, to take care that the punishment be proportioned to the offence, and that some be not punished for doing things for which others are not so much as called to account. Above all things, in punishing we ought to guard against passion; for the man who is to pronounce a sentence of punishment in a passion, can never preserve that mean between what is too much and too little, which is so justly recommended by the Peripatetics.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

LATIN: VERGIL AND HORACE.

I Translate, adding such explanations as appear desirable

(1) Dicendum et quæ sint duris agrestibus arma,
Quis sine nec potuere seri nec surgere messes
Vomis et inflexi primum grave robur aratri,
Tardaque Eleusinæ matris volventia plaustra,
Tribulaque traheæque et iniquo pondere rastri;
Virgea præterea Celei vilisque supellex,
Arbuteæ crates et mystica vannus Iacchi.
Omnia quæ multo ante memor provisa repones,
Si te digna manet divini gloria ruris.
Continuo in silvis magna vi flexa domatur
In burim et curvi formam accipit ulmus aratri.
Huic ab stirpe pedes temo protentus in octo,
Binæ aures duplici aptantur dentalia dorso.
Cæditur et tilia ante iugo levis, altaque fagus,

Stivaque, quæ cursus a tergo torqueat imos;
Et suspensa focis explorat robora fumus.

Remark on the other reading (exploret) for 'explorat' in the last line.

What tone is perceptible in the fourth, seventh and ninth lines of the passage? Give any other lines you remember of this poem in which the same tone is strikingly manifest.

Quote what Horace in his Satires says of Vergil's style.

(2) At dixi fluere hunc lutulentum, sæpe ferentem
Plura quidem tollenda relinquendis. Age, quæso,
Tu nihil in magno doctus reprendis Homero?
Nil comis tragici mutat Lucilius Acci?
Non ridet versus Enni gravitate minores,
Cum de se loquitur, non ut majore reprensis?
Quid vetat et nosmet Lucili scripta legentes
Quærere, num illius, num rerum dura negarit
Versiculos natura magis factos et euntes
Mollius, ac si quis, pedibus quid claudere senis,
Hoc tantum contentus, amet scripsisse ducentos
Ante cibum versus, totidem cœnatus; Etrusci
Quale fuit Cassi rapido ferventius amni
Ingenium, capsis quem fama est esse librisque
Ambustum propriis. Fuerit Lucilius, inquam,
Comis et urbanus; fuerit limatior idem
Quam rudis et Græcis intacti carminis auctor,
Quamque poetarum seniorum turba; sed ille,
Si foret hoc nostrum fato dilatus in ævum,
Detereret sibi multa; recideret omne quod ultra
Perfectum traheretur; et in versu faciendo
Sæpe caput scaberet, vivos et roderet ungues.

State what you know of the Latin authors above named, and their writings. Who are alluded to as "*poetarum seniorum turba*"?

What other readings are there for '*Acci*' (line 4) and '*dilatus*' (line 19)? Remark on them.

(3) Umber et iligna nutritus glande rotundas
Curvet aper lances carnem vitantis inertem:
Nam Laurens malus est, ulvis et arundine pinguis.

Vinea submittit capreas non semper edules.
Fecundæ leporis sapiens sectabitur armos.
Piscibus atque avibus quæ natura et foret ætas,
Ante meum nulli patuit quæsita palatum
Sunt quorum ingenium nova tantum crustula promit.

Nequaquam satis in re una consumere curam;
Ut si quis solum hoc, mala ne sint vina, laboret
Quali perfundat pisces securus olivo.
Massica si cœlo supponas vina sereno,
Nocturna, si quid crassi est, tenuabitur aura.
Et decedet odor nervis inimicus; at illa
Integrum perdunt lino vitiata saporem.
Surrentina vafer qui miscet fæce Falerna
Vina, columbino limum bene colligit ovo;
Quatenus ima petit volvens aliena vitellus.
Tostis marcentis squillis recreabis et Afra
Potorem cochlea; nam lactuca innatat acri
Post vinum stomacho; perna magis ac magis hillis
Flagitat immorsus refici; quin omnia malit
Quæcunque immundis fervent allata popinis

Remark on the question whether Horace intended the gastronomic precepts of Catius in this Satire to be taken seriously.

II. Translate, remarking on the grammatical construction or force of the words italicised,

(*a*) Contemplator item, quum se nux plurima silvis
Induit in florem, et ramos curvabit olentes.

(*b*) ——————— Sic omnia fatis
In pejus *ruere*, ac *retro* sublapsa *referri*.

(*c*) Nil ego *contulerim* iucundo sanus amico.

(*d*) ——————— O seri *studiorum!*

(*e*) ——————— *Morbi* purgatum.

(*f*) *Commissa tacere* qui nequit, hic niger est.

III. Translate, with annotations:

(*a*) ——— At hunc liberta securi
Divisit medium, fortissima Tyndaridarum.

(*b*) ——————— Catillum
Evandri manibus tritum, dejecit.

(*c*) ——— Non nosti, quid pater, inquit,
Chrysippus dicat.

(*d*) ——— Missi magnis de rebus uterque
Legati, aversos soliti componere amicos

(*e*) Linquimus, insani ridentes præmia scribæ
Prætextam, et latum clavum, prunæque batillam.

(*f*) ——— Insanus nigris medium impediit crus
Pellibus.

(*g*) Naviget Anticyram.

(*h*) Quid? Quum Picenis excerpens semina pomis
Gaudes, si cameram percusti forte, penes te es?

IV. (*a*) State what you know of the life and character of Horace, illustrating by quotations from the Satires.

(*b*) "The Georgics have been characterised as the Glorification of Labour." How is this remark justified by the First Book?

(*c*) Compare Vergil and Horace in their feeling for, and expression of, the beauty of outward nature.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

LATIN: LIVY AND TACITUS.—COMPARATIVE GRAMMAR AND PHILOLOGY.

I. Translate:

1. Tamen ne undique tranquillæ res essent, certamen in icctum inter primores civitatis, patricios plebeiosque, ab tribunis plebis, Q. et Cn. Ogulniis, qui undique criminandorum patrum apud plebem occasionibus quæsitis, postquam alia frustra tentata erant, eam actionem susceperunt, qua non infimam plebem accenderent, sed ipsa capita plebis, consulares triumphales plebeios, quorum honoribus nihil præter sacerdotia, quæ nondum promiscua erant, deesset.

What are the *sacerdotia* above alluded to? Give a brief account of them.

2. Sed re neutro inclinata magistratu se abdicavit, seu quia vitio creatus erat ut scripsere quidam, seu quia tribum plebis tulerunt ad plebem idque plebs scivit, ut si M. Furius pro dictatore quid egisset quingentum millium ei multa esset; sed auspiciis magis quam novi exempli rogatione deterritum ut potius credam, quam

ipsius viri facit ingenium, tum quod ei suffectus est extemplo P. Manlius dictator, quem quid creari attinebat ad id certamen quo M. Furius victus esset? et quod eundem M. Furium dictatorem insequens annus habuit, haud sine pudore certe fractum priore anno in se imperium repetiturum; simul quod eo tempore quo promulgatum de multa eius traditur, aut et huic rogationi, qua se in ordinem cogi videbat, obsistere potuit aut ne illas quidem, propter quas et hæc lata erat, impedire, et quod usque ad memoriam nostram, tribuniciis consularibusque certatum viribus est; dictaturæ semper altius fastigium fuit.

What was the occasion of the struggle thus terminated? Explain 'vitio creatus.'

II. Translate and explain the terms and phrases:—

(*a*) 'In album relata.'

(*b*) 'Ordines duxisse.'

(*c*) 'Appellatio provocatioque.'

(*d*) 'A plebe consensu populi consulibus negotium mandatur.'

(*e*) 'Fustuarium meretur.'

(*f*) 'Causarii.'

(*g*) 'Cuniculum agere.'

(*h*) 'Tensas ducere.'

III. Translate:

Gnarum id Tiberio fuit, utque premeret vulgi sermones, monuit edicto multos illustrium Romanorum ob rem publicam obiisse, neminem tam flagranti desiderio celebratum. Idque et sibi et cunctis egregium, si modus adiiceretur; non enim eadem decora principibus viris et imperatori populo, quæ modicis domibus aut civitatibus. Convenisse recenti dolori luctum et ex mærore solatia; sed referendum iam animum ad firmitudinem ut quondam divus Iulius amissa unica filia, ut divus Augustus ereptis nepotibus abstruserint tristitiam. Nil opus vetustioribus exemplis: quotiens populus Romanus clades exercitum, interitum ducum, funditus amissas nobiles familias constanter tulerit. Proin repeterent sollemnia, et quia ludorum Megalesium spectaculum suberat, etiam voluptates resumerent.

2. Quid enim primum prohibere et priscum ad morem recidere aggrediar? Villarum ne infinita spatia? familiarum numerum

et nationes? Argenti et auri pondus? Æris tabularumque miracula? promiscuas viris et feminis vestes? atque illa feminarum propria, quis lapidum causa pecuniæ nostræ ad externas aut hostiles gentes transferuntur. Nec ignoro in conviviis et circulis incusari ista, et modum posci: sed siquis legem sanciat, pœnas indicat, idem illi civitatem verti, splendidissimo cuique exitium parari, neminem criminis expertem clamitabunt.

IV. Translate and explain the following:—

(*a*) 'Ut ovans iniret.' (What was an ovation, and how far did it differ from a triumph?)

(*b*) 'Nomen Pisonis radendum fastis censuit' (What did this involve?)

(*c*) 'Saturnini turbatores plebis'

(*d*) 'Censoria etiam potestate legendis equitum decuriis functus.'

(*e*) 'Per expeditos et solitudinem gnaros mutantem mapsalia Tacfarinatem proturbabat' (State briefly what you know of the individual mentioned.)

V. Remark on the style of Tacitus, mentioning its principal distinctive features, and contrasting it with that of Livy.

VI. (1) Is there any philological relationship between each two of the following pairs of words? If any, how are they related?—*Legalis*, loyal; *Stella*, star; *Diu*, journey; *Decem*, ten; *Lex*, law; *Vivus*, quick.

(2) To what strictly *Roman* name does *Pontius* correspond? What law is herein illustrated of the relation of consonants in Latin and the kindred languages? Give other illustrations.

(3) Compare Latin and English in respect of their employment of abstract and concrete expressions, giving examples.

(4) What principles of phonetic change are exemplified by the words that have come into the English language from the Latin, not direct, but through old French?

(5) Give examples from Latin of inflections found in pronouns and not in substantives. How far do these throw light upon the origin of corresponding inflections in substantives?

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

LATIN PLAUTUS AND TERENCE.

I. Translate

(i) Primum dum parentes fabri liberum sunt
Et fundamentum substruunt liberorum ;
Extollunt, parant, sedulo in firmitatem, et
Ut in usum boni sint et in speciem populo.
Sibique aut materiæ ne parcunt, nec sumtus
Ibi sumtui esse ducunt :
Expoliunt, docent literas, jura, leges ;
Sumtu suo et labore
Nituntur, ut alii sibi esse illorum similes expetant.
Ad legionem
Quom itum, adminiculum eis dauunt tum jam aliquem cognatum suum.
Eatenus abeunt a fabris. Unum emeritum est stipendium :
Igitur tum specimen cernitur, quo eveniat ædificatio ·
Nam ego ad id frugi usque et probus fui, in fabrum potestate dum fui.
Posteaquam immigravi in ingenium meum,
Perdidi operam fabrorum illico oppido.
Venit ignavia : ea mihi tempestas fuit ;
Ea mi adventu suo grandinem, imbrem, attulit ;
Hæc verecundiam mi et virtutis modum
Deturbavit detexitque a me illico.

(ii) LA. Meas oportet intus esse hic mulieres, mi Charmides.
CH. Jupiter te perdat et, si sunt, et, si non sunt, tamen !
LA. Introrumpam jam huc in Veneris fanum. CH. In barathrum mavelim.
Obsecro, hospes, da mihi aliquid, ubi condormiscam, loci.
SC. Istic, ubi vis, condormisce nemo prohibet : publicum est.
CH. At vides me, ornatus ut sim vestimentis uvidis
Recipe me in tectum ; da mihi vestimenti aliquid aridi

Dum arescunt mea. In aliquo tibi gratiam referam loco.

SC. Tegillum eccillud mihi unum arescit; id, si vis, dabo

Tu istæc mihi dato exarescent faxo. CH Eho, an te pænitet,

In mari quod elavi, nisi hic in terra iterum eluam?

SC. Eluas tu an exungare, ciccum non interduim.

Tibi ego nunquam quidquam credam, nisi accepto pignore.

Tu vel suda, vel peri algu, vel tu ægrota, vel vale.

(iii) SO O mi gnate!

PAM. Mea mater, salve SO. Gaudeo venisse salvom salvan'

Philumena est? PAM Meliuscula est. SO. Utinam istuc ita Di faxint.

Quid tu igitur lacrumas? aut quid es tam tristis?

PAM. Recte, mater.

SO. Quid fuit tumulti? dic mihi · an dolor repente invasit?

PAM. Ita factum'st. SO. Quid morbi est? PAM Febris.

SO. Cotidiana? PAM. Ita aiunt.

I sodes intro, consequar jam te, mea mater. SO. Fiat.

PAM. Tu pueris curre, Parmeno, obviam, atque eis onera adjuta.

PAR. Quid? non sciunt ipsi viam, domum qua redeant? PAM. Cessas?

(iv) Non nunc de pecunia agitur: sed illud, quomodo
Minimo periculo id demus adolescentulo.
Nam si semel tuum animum ille intellexerit,
Prius proditurum te tuam vitam, et prius
Pecuniam omnem, quam abs te amittas filium: hui!
Quantam fenestram ad nequitiem patefeceris?
Tibi autem porro ut non sit suave vivere.
Nam deteriores omnes fimus licentia.
Quodcunque inciderit in mentem, volet: neque id

Putabit pravom, an rectum siet, quod petet.
Tu rem perire, et ipsum non poteris pati.
Dare denegaris : ibit ad illud ilico,
Quo maxume apud te se valere sentiet ;
Abiturum se abs te esse ilico minabitur.

(v) CL. Emori cupio. CH. Prius quæso disce, quid sit vivere :

Ubi scies, si displicebit vita, tum istoc utitor.

SY. Here, licetne ? CH. Loquere. SY. At tuto ? CH. Loquere.

SY. Quæ ista'st pravitas,
Quæve amentia est, quod peccavi ego, id obesse huic ?

CH. Ilicet.

Ne te admisce : nemo accusat, Syre, te ; nec tu aram tibi,
Nec precatorem pararis.

II. Compare Plautus and Terence, briefly, but with illustrations from your plays, as regards :—

(i) the antiquity of their diction ;

(ii) the sources from which they derived their plots ;

(iii) the character of their genius.

III. (a) State 'Grimm's law,' and apply its principles to comparison of the following Latin words with the English words they correspond to : *dico*, *frango*, *caput*, *dens*, *traho*, *bos*, *genus*, *anser*.

(*b*) "Cases (except the locative singular) ..... with vowels *e*, *i*, *o*, *u*, are for the most part lengthened from primitive forms with *a*." Explain and illustrate this statement and its exception, and mention some adverbial locative forms.

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

LATIN : CICERO—TUSC. DISPUTATIONS, AND PLINY, LETTERS, BOOKS I, II, III.

I. Translate into English :

(1) Vinum etiam parvulis lagunculis in tria genera descripserat, non ut potestas eligendi, sed ne jus esset recusandi. Et aliud sibi et nobis, aliud minoribus amicis (nam gradatim amicos habet,) aliud

suis nostrisque libertis. Animadvertit, qui mihi proximus recumbebat, et, an probarem, interrogavit. Negavi. Tu, ergo, inquit, quam consuetudinem sequeris? Eadem omnibus pono. Ad cœnam enim, non ad notam, invito, cunctisque rebus exæquo, quos mensa et toro æquavi. Etiamne libertos? Etiam. Convictores enim tunc, non libertos, puto. Et ille: Magno tibi constat. Minime. Qui fieri potest? Potest. Quia scilicet liberti mei non idem, quod ego, bibunt sed idem ego, quod liberti. Et hercule, si gulæ temperes, non est onerosum, quo utaris ipse, communicare cum pluribus.

(2) Ubi hora balnei nuntiata est (est autem hieme nona, æstate octava), in sole, si caret vento, ambulat nudus. Deinde movetur pila vehementer et diu. Nam hoc quoque exercitationis genere pugnat cum senectute. Lotus accubat et paulisper cibum differt: interim audit legentem remissius aliquid et dulcius. * * * * Apponitur cœna non minus nitida, quam frugi, in argento puro et antiquo * * * * Inde illi, post septimum et septuagesimum annum, aurium oculorumque vigor integer; inde agile et vividum corpus, solaque ex senectute prudentia.

What o'clock according to our division of the hours of the day do the hours here mentioned correspond to?

II. Translate into English:

(1) An potest is, qui non est, re ulla carere? triste enim est nomen ipsum carendi, quia subjicitur hæc vis: habuit, non habet: desiderat, requirit, indiget. Opinor, hæc incommoda sunt carentis: caret oculis, odiosa cæcitas; liberis, orbitas. Valet hoc in vivis; mortuorum autem, non modo vitæ commodis, sed ne vita quidem ipsa, quisquam caret. De mortuis loquor, qui nulli sunt. Nos, qui sumus, num aut cornibus caremus, aut pennis? Sit, qui id dixerit? certe nemo. Quid ita? Quia cum id non habeas, quod tibi nec usu, nec natura sit aptum, non careas, etiam si sentias te non habere * * * * Carere igitur hoc significat, egere eo, quod habere velis. Inest enim velle in carendo. * * * * Sed ne vivus quidem bono caret, si eo non indiget; sed in vivo intelligi tamen potest regno carere; dici autem hoc in te satis subtiliter non potest; potuisset in Tarquinio, cum regno esset expulsus; at in mortuo ne intelligi quidem potest. Carere enim, sentientis est; nec sensus in mortuo; ne carere quidem igitur in mortuo est.

(2) Intelligendum est igitur, nec gloriam popularem ipsam per sese expetendam, nec ignobilitatem extimescendam. 'Veni Athe

nas,' inquit Democritus, 'neque me quisquam agnovit.' Constantem hominem et gravem! qui glorietur, a gloria se abfuisse. An tibicines, iique qui fidibus utuntur, suo, non multitudinis arbitrio, cantus numerosque moderantur; vir sapiens, multo arte majore præditus, non, quid verissimum sit, sed quid velit vulgus, exquiret? An quidquam stultius, quam, quos singulos, sicut operarios barbarosque, contemnas, eos esse aliquid putare universos?

(3) Socrates, quidem, cum rogaretur, cujatem se esse diceret, Mundanum, inquit; totius enim mundi se incolam et civem arbitrabatur.

III. Give, concisely, Cicero's criticism of the Epicurean doctrine Nihil bonum nisi voluptas,' in reference to his own proposition Sapientes esse semper beatissimos.'

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

LATIN COMPOSITION.

Write a Latin Essay of at least three pages on one only of the following subjects:—

Quis nescit primam esse historiæ legem, ne quid falsi dicere audeat? deinde ne quid veri non audeat? Ne qua suspicio gratiæ sit in scribendo? Ne qua simultatis? (Cic. De Or., II. 15.)

On the profit you have derived from the study of Latin in general and from the study of one of your Latin authors in particular.

A description of India considered in its physical aspect.

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

TRANSLATION FROM LATIN PASSAGES NOT IN THE TEXT-BOOKS INTO ENGLISH.

I. Translate into English.

(1) Omnes homines, Patres Conscripti, qui de rebus dubiis consultant, ab odio, amicitia, ira atque misericordia vacuos esse decet Haud facile animus verum providet, ubi illa officiunt; neque quisquam omnium lubidini simul et usui paruit. Ubi intenderus ingenium, valet· si lubido possidet, ea dominatur, animus nihil

valet. Magna mihi copia memorandi, Patres Conscripti, qui reges atque populi, ira aut misericordia impulsi, male consuluerunt; sed ea malo dicere, quæ majores nostri, contra lubidinem animi, recte atque ordine fecere. Bello Macedonico, quod cum rege Perse gessimus, Rhodiorum civitas, magna atque magnifica, quæ populi Romani opibus creverat, infida atque adversa nobis fuit; sed postquam bello confecto, de Rhodiis consultum est, majores nostri, ne quis divitiarum magis, quam injuriæ causa bellum inceptum diceret, impunitos dimisere. Item bellis Punicis omnibus, cum sæpe Carthaginienses et in pace, et per inducias multa nefaria facinora fecissent, nunquam ipsi per occasionem talia fecere; magis, quid se dignum foret, quam quid in illis jure fieri posset, quærebant. Hoc idem providendum est, Patres Conscripti, ne plus valeat apud vos P. Lentuli et cæterorum scelus, quam vestra dignitas non magis iræ, quam famæ consulatis.

(2) Conciliato populi favore, tentavit per partem Tribunorum, ut sibi Ægyptus provincia plebiscito daretur, nactus extraordinarii imperii occasionem, quod Alexandrini regem suum, socium atque amicum a Senatu appellatum, expulerant, iesque vulgo improbabatur.

(3) Annule, formosæ digitum vincture puellæ,
In quo censendum nil, nisi dantis amor;
Munus eas gratum; te læta mente receptum
Protinus articulis induat illa suis.
Tam bene convenias, quam mecum convenit illi;
Et digitum justo commodus orbe teras.
Felix, a domina tractaberis, annule, nostra;
Invideo donis jam miser ipse meis.
O utinam fieri subito mea munera possim
Artibus Æeæis, Carpathiive senis.

II. Give instances of the adverbial use of the accusative in Latin.

III. How are participles used substantively? Give illustrations.

IV. When and with what objects, and how, is the normal order of words in a sentence altered in Latin, in prose, and in verse?

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

ALGEBRA AND TRIGONOMETRY.

I. Prove that the equations $x^5 + 19x - 140 = 0$; and $7x^4 - 12x^3 + 46x^2 + 12x + 7 = 0$; have two common roots.

II. If $C_0 + C_1x + C_2x^2 + \ldots\ldots\ldots$ be a recurring series of the *third order*, find the scale of relation and the sum of the series continued to infinity.

Sum to n terms the series, $2 + 0 + 7 - 4 + 21 - 26 + 71 - \ldots\ldots$

III. If $\frac{p}{q}$, $\frac{p'}{q'}$, be any two consecutive convergents to $\sqrt{N}$, and $\frac{\sqrt{N} + a''}{r''}$ the complete quotient of the order next after $\frac{p'}{q'}$, then $a'' = \pm (pp' - qq'N)$, and $r'' = \pm (q'^2N - p'^2)$.

Solve in positive integers the equation $x^2 - 19y^2 = 81$.

IV. Distinguish between *convergent* and *divergent* series.

Examine whether the series whose n^{th} terms are $\frac{1}{\log. (n+1)}$ and $\frac{1}{n \sin \frac{n\pi}{2} - n^2 \cos \frac{n\pi}{2}}$ respectively, are convergent or divergent.

V. Explain a method of solving the biquadratic $ax^4 + 4bx^3 + 6cx^2 + 4dx + e = 0$; and express the roots of the *reducing cubic* in terms of those of the quartic.

The quartic will have *three* equal roots if $I \equiv ae - 4bd + 3c^2 = 0$ and $J \equiv ace + 2bcd - ad^2 - eb^2 - c^3 = 0$.

VI. The equation $f(x) \equiv x^n + p_1x^{n-1} + p_2x^{n-2} + \ldots\ldots + p_n = 0$ has integral coefficients. Prove—

(1) that the roots are all equal or all imaginary if $2np_2 = (n-1)p_1^2$;

(2) that if a be an integral root, $f(1)$, $f(0)$, $f(-1)$ are respectively divisible by $a - 1$, a and $a + 1$;

(3) that the equation cannot have a commensurable root, if $f(0)$ and $f(1)$ are odd numbers.

VII. Express $\text{Cos}\, n\theta$ in a series of descending powers of $\text{Cos}\, \theta$, n being a positive integer. Prove that if n be even—

$$\text{Sec}^2 a + \sec^2\left(a + \frac{\pi}{n}\right) + \sec^2\left(a + \frac{2\pi}{n}\right) + \ldots\ldots \text{ to } 2n \text{ terms}$$
$$= 2n^2 \operatorname{cosec}^2 na.$$

VIII. Assuming the exponential values of Sin x and Cos x, expand $\tan^{-1} x$ and e^{3x}. Cos $4x$ in ascending powers of x.

Find the sum of the series—

$$\tan\phi \sin^2\phi - \tfrac{1}{3}\tan^3\phi \sin^2 3\phi + \tfrac{1}{5}\tan^5\phi \sin^2 5\phi - \ldots\ldots \text{ad. inf}$$

IX. The sines of the angles of a spherical triangle are proportional to the sines of the opposite sides.

If A', B', C', represent the angles formed by the chords of a spherical triangle ABC, prove that $\dfrac{\text{Sin }(A'-B')}{\text{Sin }C'} = \dfrac{\text{Sin }(A-B)}{\text{Sin }C}$.

X. Find the area of a spherical triangle.

If E, E_1, E_2, E_3 be the spherical excesses of an associated system of triangles—

$$\text{Cot}\,\frac{E}{4} \cdot \tan\frac{E_1}{4} \cdot \tan\frac{E}{4} \cdot \tan\frac{E_3}{4} = \cot^2\frac{S}{2}.$$

MONDAY, 19TH JANUARY, 2 TO 5 P.M.

GEOMETRY OF TWO AND THREE DIMENSIONS.

I. Prove that an equation of the first degree in x and y represents a straight line, and that if it involve an arbitrary constant in the first power, the straight line passes through a fixed point.

PM, PN are perpendiculars from a point P on two fixed straight lines meeting in A: MQ, NQ, are drawn parallel to the fixed lines to meet in Q. Show that if P lie on a fixed straight line, Q will lie on another fixed straight line.

Show that if the locus of P be moved parallel to itself, the locus of Q will also move parallel to itself; and that the point of intersection of these two loci will move along a fixed straight line passing through A.

II. Prove that a homogeneous equation of the nth degree in x and y denotes n straight lines.

The necessary and sufficient condition that two of the lines represented by the equation

$$ay^4 + bxy^3 + cx^2y^2 + dx^3y + ex^4 = 0$$

should be at right angles is

$$(b+d)(ad+be) + (e-a)^2(a+c+e) = 0.$$

III. Trace the following loci :—

(i) $(r \cos \theta - a)(r - a \cos \theta) = 0.$

(ii) $(x - y)^2 + (x - a)^2 = 0.$

(iii) $(x - y)^2 + 2a(x + y) + a^2 = 0.$

(iv) $12x^2 - 23xy + 10y^2 - 22x + 31y = 14.$

(v) $2x^2 - 5xy - 3y^2 - x - 4y + 6 = 0.$

IV. Find the locus of the middle points of all chords of $ax^2 + 2hxy + by^2 = 1$ making an angle θ with the axis.

If $Ax^2 + 2Hxy + By^2 = 0$ be a pair of conjugate diameters of $ax^2 + 2hxy + by^2 = 1$, then $aB - 2hH + bA = 0$.

V. If $\alpha = 0$, $\beta = 0$ be a pair of tangents. $\gamma = 0$, their chord of contact with the conic $S = 0$, interpret and exhibit the geometrical relations of the conic with the loci

$$S - \alpha\beta = 0,\ S - \alpha\gamma = 0,\ S - \alpha^2 = 0,\ S - \gamma^2 = 0.$$

VI. Define an ellipsoid, and find its equation in the form $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1.$

Find the locus of the middle points of parallel chords of an ellipsoid, and prove that the sum of the squares of three conjugate diameters is constant.

VII. Show that through any point of an hyperboloid of one sheet two straight lines can be drawn which lie wholly in the surface, and find the locus of the point if these lines are perpendicular to one another.

VIII. Find the equation to the enveloping cone of $\frac{x^2}{l} + \frac{y^2}{m} + 2z = 0$, the vertex of the cone being at a given point.

If three of the generating lines of this cone be mutually at right angles, show that the vertex must lie on a certain paraboloid, and that the polar plane of the vertex will always touch another paraboloid.

IX. Find the conditions that the general equation of the second degree may represent (i) a cone, (ii) a surface of revolution.

Show that $\sqrt{x} + \sqrt{y} + \sqrt{z} = 0$, represents a right circular cone, and find its vertical angle.

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

NEWTON AND DIFFERENTIAL CALCULUS.

I. State and prove Lemma I.

Show that the axiom, "if equals be taken from equals the remainders are equal" does *not* hold when applied to quantities which vanish in a ratio of equality. Give an example.

Prove that the surface of a sphere is four times the area of a great circle.

II. Enunciate and prove Lemma X.

If after a time t from rest $v^2 \propto t\,(2-t)$, find the space described in the first unit of time.

III. A body moves about a centre of force S. Prove that the radius vector t describes equal areas in equal times.

If a body describe an ellipse about a centre of force in the focus, the time of describing the arc between the extremities of the latera recta on the same side of the major-axis is to the periodic time as $\text{Sin}^{-1}(e) : \pi$.

IV. Find the law of force to the centre under which a body will describe an ellipse. Hence deduce the time of oscillation of a particle moving under the action of a force in its line of motion, the force varying directly as the distance of the particle from a fixed point in that line.

V. Differentiate with respect to x

$$\left\{ f(x) \right\}^{\phi(x)} ; \tan^{-1} \frac{\sqrt{1+x^2} + \sqrt{1-x^2}}{\sqrt{1+x^2} - \sqrt{1-x^2}} \text{ and}$$

$$\text{Sec}^{-1}\left(\frac{1}{x}\right) + \text{Cot}^{-1} \frac{\sqrt{1-x^2}}{x} .$$

If $ax^2 + 2bxy + cy^2 + dx + ey + f = 0$, show that

$$\frac{d^3}{dx^3} \left\{ \left(\frac{d^2y}{dx^2}\right)^{-\frac{2}{3}} \right\} = 0.$$

VI. If $y = z + x\phi(y)$, where z and x are independent, and u be any function of y, prove that $\dfrac{d^2u}{dx^2} = \dfrac{d}{dz} \left\{ \overline{\phi(y)}\Big|^2 \cdot \dfrac{du}{dz} \right\}$

Apply Lagrange's Theorem to find a root of the cubic $y^3 - 5y + 1 = 0$.

VII. Explain the method for finding the maxima and minima values of a function of x, and show how they are distinguished from each other.

Find the maximum and minimum elliptic sections of a right cone standing on a circular base.

VIII. The point (a, b) is a *triple* point on a curve. Show how to find the equations to the three tangents at (a, b).

Example,—$(x + 1)^4 = (2x - y)(2x + y + 4)(y + 2)$.

IX. Find the co-ordinates of the centre of the circle of curvature at any point (x, y) of a given curve, and prove that $\frac{1}{\rho} = \frac{d}{dx}\left(\frac{dy}{ds}\right)$.

The radius of curvature at any point P of the curve $27ay^2 = (3a - x)(x + 6a)^2$, varies as the square on the normal PK, K being on the axis of y.

X. Trace the curves—

$y^4 - x^4 + 2ax^2y = 0$; $\rho^2 = a^2 \operatorname{Sin} 2\theta$; and $\rho = a \operatorname{Cos} 4\theta$.

TUESDAY, 20TH JANUARY, 2 TO 5 P.M.

INTEGRAL CALCULUS AND DIFFERENTIAL EQUATIONS.

Full Marks will be awarded for answering correctly any seven of the nine questions.

I. Integrate the following :—

$$(a)\ \frac{dx}{x^6\sqrt{1 + x^2}},\ (b)\ \frac{dx}{(a + x)\sqrt{1 + x^2}},\ (c)\ \frac{dx}{x^n(1 - x)^m}.$$

II. (α) In what cases is $\frac{x^m dx}{(a + bx^2)^{\frac{n}{2}}}$ immediately integrable?

Find $\int \frac{dx}{x^2(a + bx^2)^{\frac{5}{2}}}$.

(β) Show that $e^x Pdx$ is immediately integrable, if P is the sum of two functions one of which is the derived function of the other.

$$Ex.\ \int e^x \cdot \frac{x(x - 1)}{(x^2 + x + 1)^2}\, dx.$$

III. (α) Find the following definitive integrals :—

$$(a)\ \int_0^\infty \frac{dx}{(1+x^2)^n},\ (b)\ \int_0^1 \frac{dx}{x} \log \frac{1+x}{1-x}.$$

(β) If $f(x) = f(-x)$, prove that $\int_{-\infty}^{\infty} f\left(x - \frac{1}{x}\right) dx =$

$\int_{-\infty}^{\infty} f(x)\, dx$; and apply this result to show that

$$\int_{-\infty}^{\infty} -\left(x^2 + \frac{1}{x^2}\right) dx = \frac{\sqrt{\pi}}{e^2}.$$

IV. (α) Find the area of an ellipse given by the general equation $ax^2 + 2bxy + cy^2 + 2dx + 2ey + f = 0$, the axes being rectangular.

(β) Show that the whole area of the pedal of any closed curve is equal to the sum of the areas of the curve and of the pedal of its evolute, both pedals having the same origin.

V. (α) Show that the length of a loop of the curve

$$r^n = a^n \cos n\theta \text{ is } \frac{a\sqrt{\pi}}{n} \cdot \frac{\Gamma\left(\frac{1}{2n}\right)}{\Gamma\left(\frac{n+1}{2n}\right)}.$$

(β) Find the volume of any portion of an ellipsoid cut off by any plane.

VI. (α) Change the order of integration in the double integral

$$\int_0^{2a} \int_{\sqrt{2ax-x^2}}^{\sqrt{2ax}} V dx dy.$$

(β) Prove that $\iiint \frac{dx dy dz}{\sqrt{1-x^2-y^2-z^2}} = \frac{\pi^3}{8}$, the integral being extended to all positive values of the variables for which the expression is real.

VII. (α) Investigate the condition when $Mdx + Ndy = 0$ is integrable by a factor which is a function of x only, and obtain an integrating factor of $\left\{ 2x^3 y + \frac{3}{2} x^2 y^2 + 4xy + \frac{3y^2}{2} + \phi(x) + x\phi'(x) \right\} dx + (2x^2 + 3xy)\, dy = 0$, and the corresponding integral.

(β) Show that in a certain case, a linear differential equation of the second order may be depressed to one of the first order.

VIII. (a) In deriving the singular solution from the complete primitive, the conditions $\frac{dx}{dc} = 0, \frac{dy}{dc} = 0$ are equivalent except in certain cases. Prove this.

(β) Reduce the equation $\left(x - y\frac{dy}{dx}\right)\left(x\frac{dy}{dx} - y\right) = a^2\frac{dy}{dx}$ to Clairaut's form, and obtain the general integral and singular solution.

IX. Solve the following equations:—

(1) $x^2\frac{d^2y}{dx^2} - x\frac{dy}{dx} + y = 0.$

(2) $\frac{d^3y}{dx^3} + 2\frac{d^2y}{dx^2} - 4\frac{dy}{dx} - 8y = e^{-mx}.$

(3) $(x + z)p + (y + z)q = x + y.$

(4) $ar + (a + b)s + bt = 0.$

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

STATICS AND HYDROSTATICS.

I. Explain the terms *force polygon* and *funicular polygon*, and show how they are constructed. State the graphical conditions of equilibrium, and determine the character of the funicular that the system of forces may be equivalent to a couple

II. (a) Deduce the analytical conditions of equilibrium of a system of co-planar forces acting on a rigid body from the equation of virtual work.

(β) Apply the equation of virtual work to show that the normal at any point of an ellipse bisects the angle between the focal distances.

III. (a) Find the condition that a system of forces acting on a rigid body may have a single resultant, and show that the quantity expressing this condition is an invariant.

(β) $ABCD$ is a regular tetrahedron. Forces P, Q, R act along the edges BC, CA, AB in order, and forces P_1, Q_1, R_1 along AD, BD, CD. Show that they have a single resultant if $PP_1 + QQ_1 + RR_1 = 0$.

IV. (α) Find the position of the centre of mass of a circular lamina in which the density at any point varies as the nth power of the distance from a given point of the circumference.

(β) Through a diameter of the base of a right circular cone are drawn two planes cutting the cone in parabolas. Find the centroid of the volume of the cone included between these planes and the vertex

V. (α) A heavy inextensible string rests, in limiting equilibrium, on a rough curve in a vertical plane. Find the tension at any point.

(β) A heavy uniform chain rests in limiting equilibrium on a rough cycloidal arc whose axis is vertical and vertex upwards, one extremity being at the vertex and the other at the cusp. Prove that $e^{\frac{\mu\pi}{2}} = \frac{3}{1+\mu^2}$.

VI. Prove *ab initio* that the equilibrium of a homogeneous fluid under the action of forces that tend to fixed centres and are functions of the distances from those centres is always possible.

A mass of fluid rests upon a plane subject to a central attractive force $\frac{\mu}{r^2}$, the centre being at a distance b from the plane on the side opposite to that on which the fluid is; and a is the radius of the free spherical surface of the fluid. Show that the whole pressure on the plane is $\frac{\pi\rho\mu}{a} \cdot (a-b)^2$.

VII. A mass of homogeneous liquid, contained in a vessel, rotates uniformly about a vertical axis. Find the pressure at any point, and the surfaces of equal pressure.

A vertical cylinder containing water rotates uniformly about its axis. A paraboloid of revolution whose specific gravity is ·5 just floats to the water's edge, with its vertex downwards. Show that the angular velocity is $\frac{\sqrt{g}}{l}$, l being the latus rectum.

VIII. A flexible surface of any form is exposed to the action of fluid. Find the relation between the pressure, principal tensions, and principal curvatures, at any point.

IX. A cylinder whose axis is vertical is floating in a fluid in which the density at any point varies as the square of the depth. The cylinder is depressed till its upper end just coincides with the surface of the fluid; and on being let go, it rises just out of the fluid. Show that when the cylinder was floating, the depth immersed was to the height of the cylinder as $1 : \sqrt[3]{\frac{1}{4}}$.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

OPTICS AND ASTRONOMY.

I. Prove the formula—

$$\frac{\mu}{p} - \frac{1}{q} = \frac{\mu - 1}{r} \text{ for refraction at a spherical surface.}$$

A transparent globe is placed in front of, and touching, a plane mirror. Find the position to be given to an object on the line through the centre of the globe perpendicular to the mirror, so that its image formed by two refractions through the globe and one reflexion at the mirror may coincide with itself.

II. Homogeneous light diverging from a point in either of two transparent media separated by a plane, is incident on the other: determine the caustic of its rays after refraction at the surface of separation.

III. A ray whose direction cosines are l, m, n, is reflected at a plane whose equation is $px + qy + rz = o$; find the direction cosines of the reflected ray.

A ray is reflected in succession from three planes at right angles to each other: show that after the third reflexion its direction is parallel to its original direction.

IV. A ray is propagated through a medium of variable density in the plane of xy; find the differential equation to its path.

If the index of refraction is given by the equation $\mu = Ae^{y/m}$, and the ray passes through the origin, making an angle a with the axis of x, show that the equation to its path is

$$\text{Cos}\,\frac{x}{m} - \tan a \sin \frac{x}{m} = e^{-y/m}.$$

V. Draw a figure of an Astronomical telescope fitted with Ramsden's eye-piece, and trace the course of a pencil of rays through it.

Show that its magnifying power is $\frac{4}{3} \cdot \frac{F}{f}$ where F, f are the focal lengths of the object-glass and of each lens of the eye-piece.

What effect would be produced on the image by covering the central portion of the object-glass with some opaque substance.

VI. What is meant by error of level in the Transit instrument? Explain how it is determined, and calculate the effect of a small error of level on the time of transit of a star.

VII. Find the relation between the sun's right ascension, declination, and longitude.

If Υ be the first point of Aries, H the foot of the solstitial colure on the ecliptic, l the longitude of the sun S, and σ any star, prove that

$$\text{Cos } S\sigma = \cos \Upsilon\sigma \cos l + \cos H\sigma \sin l.$$

VIII. Show how to determine the latitude of a place by observation of the pole-star out of the meridian.

Describe briefly any other methods of finding the latitude with which you are acquainted.

IX. Define the term parallax, and distinguish between the parallax of the sun, and the parallax of one of the fixed stars.

From the following rough data :—

parallax of the sun $= 9''$
parallax of α Centauri $= 1''$
radius of the Earth $= 4{,}000$ miles,

show that the distance of α Centauri is upwards of $18\frac{1}{2}$ billion miles.

X. Having given the sun's declination at sunrise at a place in latitude ϕ, determine the length of the day, supposing the declination to remain unchanged.

Taking account of the change of declination, prove that, from the winter solstice to the summer solstice, the afternoon is longer than the morning, and find an approximate expression for the difference between the lengths of the morning and afternoon.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

DYNAMICS.

PART I.

I. Point out what is wrong in the following expressions:—"The acceleration of gravity is 32 feet;" "a force equal to 10 pounds."

If the kinetic energy of a train of 100 tons moving at 45 miles per hour be represented by 11, while its momentum is represented by 5, and 40 horse-power is represented by 15, find the units of length, mass and time, and show that the acceleration produced by gravity will be represented by 2016, assuming its measure to be 32 in the foot-second system.

II. In any central orbit show that the force is P where $P = h^2 r/p^3 \rho$, and that the velocity at any point is that due to one-fourth the chord of curvature through the centre of force.

If the orbit be an ellipse described about any centre of force, show that the force varies as q^3/r^2, where q is the intercept between the centre of the ellipse and the tangent on a line drawn through the centre of the ellipse parallel to the radius vector.

III. A smooth ring of mass m is strung on a smooth plane wire and moves under the action of given forces: find the velocity of the ring in any position, and the pressure between the ring and the wire.

If the wire be elliptic and the forces due to two centres of constant attractive force in the foci, each of magnitude g, then, by properly starting the ring, its velocity will ever after be $2\sqrt{ga}$, and the pressure between the wire and ring will be equal to

$mgb\,\dfrac{r_1^2 + r_2^2}{(r_1^3\, r_2^3)^{\frac{1}{2}}}$, r_1, r_2, being the distances of the ring from the foci, and a, b being the semi-axes.

IV. Define the hodograph of a moving point.

Find the hodograph in each of the following cases:—(1) a projectile, (2) a small heavy ring sliding down a smooth circular wire from its highest point, (3) an ellipse described under the action of a force in the focus.

V. A particle moves in a resisting medium under a central

attraction: . show that the differential equation of the orbit is $\frac{d^2u}{d\theta^2} + u = \frac{P}{h^2 u^2}$, where $h = r^2 \frac{d\theta}{dt}$. Is h constant?

If the orbit be a circle of radius a, the centre of force in the circumference, and the resistance of the medium $= \mu v^2$, prove that $pv \propto e^{-2\mu a\theta}$, v, p, θ, having their ordinary meanings.

PART II.

I. A straight line being given, find at what point in its length it is a principal axis of the system.

The principal axes of a cube at a point P are, the straight line joining P to O the centre of gravity of the cube, and any two straight lines at P perpendicular to PO and perpendicular to each other.

II. Enunciate the principles of the conservation of the moments of translation and rotation.

A straight tube of small bore revolves uniformly in a horizontal plane about a point at a distance c from it, and has a smooth chain of length $2a$ within it, with its middle point initially at rest at the shortest distance from the point. Prove that the space described along the tube in time t is $\frac{c}{2}\left(e^{\omega t} - e^{-\omega t}\right)$, and that the tension at any point of the chain is constant throughout the motion.

III. Determine the change in the motion of a rigid body revolving about a fixed axis after given impulses have been applied to it.

A circle hanging at rest is capable of turning about a horizontal tangent line. Find how it is to be struck that there may be no impulse on the axis, and that it may rise through 90°.

IV. If a system be in motion under the action of finite forces, and if the geometrical relations of the parts of the system be expressed by equations which do not contain the time explicitly, the change in the vis-viva of the system in passing from one position to another is equal to twice the corresponding change in the force function.

A horizontal rod of length $2a$ hangs by two parallel strings each of length b attached to its ends. If it be straightly displaced in

direction of its length, it will make small oscillations in the time $\pi\sqrt{\frac{b}{g}}$. If it be twisted horizontally through a small angle, it will make small oscillations in the time $\pi\sqrt{\frac{b}{3g}}$

V. If a rigid body capable of turning about a fixed point be struck by impulses X, Y, Z in the directions of the axes, and if F, G, H be the consequent impulses in the same direction on the fixed point, show that, ω_1, ω_2, ω_3 being the initial angular velocities about the axes $(X - F)\,\omega_1 + (Y - G)\,\omega_2 + (Z - H)\,\omega_3 = 0$.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

PROBLEMS.

I. A conic touches two given straight lines at given points equidistant from the point of intersection of the lines. Show that the locus of the extremities of its axes is a straight line and a parabola.

II. The normal at Q, a point on a parabola, meets the axes at G; a point N is taken on the axis between G and the vertex, such that $NG = QG$, and the ordinate NP is drawn meeting the parabola in P. Prove that QG is equal to the sum of NP and the semi-latus-rectum.

III. If $\frac{ayz}{y^2 + z^2} = \frac{bzx}{z^2 + x^2} = \frac{cxy}{x^2 + y^2}$, then each of these expressions is a root of $4\theta^3 - (a^2 + b^2 + c^2)\,\theta + abc = 0$.

IV. A point O is taken within a circle of radius a at a distance b from the centre, and points P_1, P_2, P_3, ... P_n are taken on the circumference such that $P_1 P_2$, $P_2 P_3$ ... $P_{n-1} P_n$, $P_n P_1$ subtend equal angles at O: prove that

$$OP_1 + OP_2 + \ldots + OP_n = (a^2 - b^2)\left(\frac{1}{OP_1} + \frac{1}{OP_2} + \ldots + \frac{1}{OP_n}\right)$$

V. If at every point of a plane curve—

$\left(\frac{d^3x}{ds^3}\right)^2 + \left(\frac{d^3y}{ds^3}\right)^2 = \frac{1}{\rho^4}$, prove that the curve is a circle.

VI. Prove that $\int_0^\infty f\left(x + \frac{1}{x}\right) \log x \frac{dx}{x} = 0.$

VII. Verify that the integral of the equation—

$$x(1-x)\frac{d^2y}{dx^2} + \left\{b - (1+a)\,x\right\}\frac{dy}{dx} + (1-a)y = 0 \text{ is}$$

$$y = Cx^{1-b}(1-x)^{b-a}\int_k^x x^{b-2}(1-x)^{a-b-1}\,dx.$$

VIII. If $u = 0$ be the rational equation, in rectangular co-ordinates, to a quadric surface, show that the equation to the enveloping cylinder whose axis has direction cosines l, m, n may be written in the form—

$$\left(l\frac{d}{dx} + m\frac{d}{dy} + n\frac{d}{dz}\right)^2 u = 0.$$

IX. A star rises due north-east at midnight at the time of the vernal equinox, and at a place whose latitude is 45°. Find its declination and right ascension.

X. A sphere of mass M and radius a, floats partly immersed in water with a point in its surface fixed at a depth c below the surface of the water, a particle of mass m being attached to the sphere at the other end of the diameter through the fixed point. If θ be the inclination of this diameter to the vertical, show that

$$\left\{a(1-\cos\theta) + c\right\}^2\left\{a(2+\cos\theta) - c\right\} = \frac{6m + 3M}{\rho},$$

where ρ is the density of water.

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

PURE MATHEMATICS.

I. Sum the series—

$$\frac{2}{3} + \frac{2\,4}{3\,5} + \frac{2\,4\,6}{3.5\,7} + \frac{2\,4\,6\,8}{3.5.7.9} + \ldots \text{ to } n \text{ terms.}$$

II. If $\alpha, \beta, \gamma, \delta$, be the roots of the equation

$$x^4 - ax^3 + bx^2 - cx + d = 0,$$

find the values of the symmetric functions $\Sigma\alpha^2\beta$, $\Sigma\alpha^2\beta\gamma$, in terms of the co-efficients and show that

$$\Sigma(\alpha+\beta)(\alpha+\gamma)(\alpha+\delta) = a^3 - 2ab + 4c$$

$$\Sigma(\alpha-\beta)(\alpha-\gamma)(\alpha-\delta) = a^3 - 4ab + 8c$$

III. Apply Sturm's theorem to determine the position of the roots of the equation

$$x^4 + x^3 - 4x^2 - 4x + 1 = 0.$$

IV. If ABC be a spherical triangle having a right angle at C, prove that—

$$\text{Sin } a = \text{Sin } A \text{ Sin } c = \tan b \div \tan B.$$

Show that the perpendiculars from the angular points of a spherical triangle upon the opposite sides meet at a point.

Deduce, or prove independently, that if two diagonals of a complete spherical quadrilateral are quadrants, the third diagonal is also a quadrant.

V. If $u = 0$, $l = 0$, are the rational equations of a conic and a straight line respectively, intersecting in A and B, show that $u + kl = 0$, where k is a constant, represents a conic passing through A and B. Show that this cannot be made to represent every such conic, and write down the equation which can be made to represent *any* conic through A and B.

VI. If $2y = \dfrac{\text{versin}^{-1} 2x}{\sqrt{(x - x^2)}}$, prove that $2(x - x^2)\dfrac{dy}{dx} + (1 - 2x)\,y = 1$ and that

$$y = 1 + \frac{2}{3}x + \frac{2\,4}{3.5}x^2 + \frac{2\,4\,6}{3.5.7}x^3 + \ldots$$

VII. In the theory of curves, define the terms osculating plane, principal normal, binormal, radius of curvature, radius of spherical curvature, angle of torsion, polar developable.

If ρ, R, $d\eta$ be the radius of curvature, radius of spherical curvature, and angle of torsion at a point on a twisted curve, prove that

$$\frac{1}{\rho^2} = \left(\frac{d^2x}{ds^2}\right)^2 + \left(\frac{d^2y}{ds^2}\right)^2 + \left(\frac{d^2z}{ds^2}\right)^2$$

$$R^2 = \rho^2 + \left(\frac{d\rho}{d\eta}\right)^2.$$

VIII. If $\Gamma(n) = \int_0^\infty e^{-x} x^{n-1}\,dx$, prove that

$$\Gamma(n+1) = n\Gamma(n)$$

$$\Gamma(\tfrac{1}{2}) = \sqrt{\pi}$$

IX. Prove that

$$f(D)ue^{mx} = e^{mx}f(D+m)u$$

where $D = \frac{d}{dx}$; and hence evaluate

$$\int e^{ax}\cos bx dx, \int xe^{ax}\cos bx dx, \int x^2 e^{ax}\cos bx dx.$$

X. Point out the geometrical connexion, if any, between the differential equations

$$\frac{dx}{P} = \frac{dy}{Q} = \frac{dz}{R},$$

$$Pdx + Qdy + Rdz = 0.$$

$$P\frac{du}{dx} + Q\frac{du}{dy} + R\frac{du}{dz} = 0.$$

Solve the equation—

$$2x(3y - z)\frac{du}{dx} + y(z - 9x)\frac{du}{dy} + 2z(3x - y)\frac{du}{dz} = 0.$$

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

PROBLEMS.

I Solve the equation—

$$x^5 + 5ax^4 + 20x^3 + 20ax^2 + 20x + 4a = 0.$$

II. If n is a positive integer, show that $\frac{\lfloor n}{e} \pm f = m(n-1)$, where f is a proper fraction and m such that $m \mp 1$ is a multiple of $n(n-3)$ according as n is even or odd.

III. If x, y be the radii of two circles each having double contact with an ellipse, the former passing through the centre and the latter through one of the foci, prove that $x : y :: a : 2b$, a, b being the lengths of the semi-axes.

IV. The centre of curvature at a point P of a parabola is O. OQ is drawn at right angles to OP meeting the focal distance of P in Q. Prove that the radius of curvature of the evolute at O is $3OQ$.

V. The equation of the cone generated by straight lines through the origin parallel to normals to the ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2}$

$= 1$ at points where it is met by the confocal $\frac{x^2}{a^2 - a} + \frac{y^2}{b^2 - a} + \frac{z^2}{c^2 - a} = 1$ is $\frac{a^2 x^2}{a^2 - a} + \frac{b^2 y^2}{b^2 - a} + \frac{c^2 z^2}{c^2 - a} = 0$.

VI. Prove that $\int_0^a x^n (2a - x)^n \, dx = 2^{2n} \int_0^a x^n (a - x)^n \, dx$.

VII. A rod capable of turning on the middle point of its length is placed at a fixed distance from a centre of force which varies inversely as the square of the distance. If $2a$ be the length of the rod and b the length of the line joining the middle point of the rod and the centre of force, show that the length of the equivalent simple pendulum is $\frac{(b^2 - a^2)^2}{3b} \cdot g$.

VIII. If one side of a thin bi-convex lens is turned towards the sun, a well-defined image may be formed on a small screen facing *that* side at a distance a. The same being done with the other side and the distance now being b, show that the power of the lens is $\frac{1 - \mu}{2(2\mu - 1)} \left(\frac{1}{a} + \frac{1}{b}\right)$.

IX. Find the form of the surfaces of equal pressure when a fluid is in relative equilibrium under the action of forces, which vary as the distance, and are equal at equal distances and tend to the angular points of a triangle, about a line through the centre of gravity of which, and perpendicular to its plane, the fluid is revolving with uniform angular velocity.

X. The maximum value of the aberration in declination of a given star is—

$$20'' \cdot 5 \sqrt{1 - (\text{Cos}\, \delta \,\text{Cos}\, \omega + \text{Sin}\, \delta \,\text{Sin}\, \omega \,\text{Cos}\, a)^2},$$

where a, δ are the right ascension and declination of the star and ω the obliquity of the ecliptic.

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

MIXED MATHEMATICS.

I. Define *astatic equilibrium* and the *astatic centre* of a system of forces in one plane.

Prove *analytically* that if all the forces in a system of forces in one plane are rotated in their plane, in the same sense and through

the same angle, round their points of application, their resultant passes through a fixed point in the plane of the forces Find the condition that this point may be the origin.

II. Find the attraction of a circular plate of uniform thickness and density on a particle in its plane, the law of attraction being that of the inverse cube of the distance.

III. A particle, under the action of no impressed forces and resting on a smooth horizontal plane, is attached by an inextensible string to a point which moves with constant angular velocity ω in a circle whose radius is r and centre origin. Show that the particle moves with reference to the uniformly revolving radius of the circle described by the point just as a simple pendulum with reference to the vertical.

IV. (α) A particle moves in a rough tube in the form of a plane curve, under no forces. Determine the motion.

(β) A particle descends a rough circular tube from the extremity of the horizontal diameter. If it stops at the lowest point, show that $3\mu e^{-\mu\pi} = 1 - 2\mu^2$.

V. (α) A rigid body moves under any forces. Find when moments may be taken about the instantaneous axis as if it were a fixed axis.

(β) A cylinder descends down a perfectly rough inclined plane by the action of gravity, its axis being horizontal. Determine the motion of the cylinder, and the friction at any time of its descent.

VI. (α) Find the metacentre of a solid of revolution floating in a liquid of variable density.

(β) A homogeneous cone floats with its vertex downward in a liquid whose density varies as the square of the depth. If the density of the cone be equal to the density of the liquid at a depth equal to a fifth of the height of the cone, find the vertical angle when the equilibrium is neutral.

VII. (α) A ray of white light is refracted through a prism in a principal plane. Find the dispersion of two colors of given refractive index.

(β) Prove that when the dispersion is a minimum $\frac{\text{Sin}\,(3\phi' - 2i)}{\text{Sin}\,\phi'} = 1 - \frac{2}{\mu^2}$, ϕ' being the angle of refraction at the first surface and i the refracting angle.

VIII. Determine the position of the ecliptic at a given instant. Under what circumstances of place and time would the ecliptic coincide with the prime vertical?

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

PROBLEMS.

PART I.

I. If p_r denote the co-efficient of x^r in the expansion of $(1 + x)^n$, n being a positive integer, show that $1\,2p_1 - 2.3p_2 + 3.4p_3 - \&c., + (n - 1)\,n(-1)^{n-2}.\,p_{n-1} = 0$.

II. Given the base and the vertical angle of a triangle, prove that the envelope of the nine point circle is itself a circle.

III. Show that the chords of quickest and slowest descent from the highest point of an ellipse in a verticle plane are at right angles to each other and parallel to the axes of the curve.

IV. If two tangents to a cycloid include a constant angle, show that their sum bears a constant ratio to the included arc of the curve.

V. If a circle be drawn with its centre at the vertex of the parabola $(x - y)^2 = 4\sqrt{2}\,.\,a(x + y)$ and with a diameter equal to the latus rectum, prove that the poles, with respect to the parabola, of tangents to the circle, lie on the equilateral hyperbola $xy = 2a^2$.

PART II.

I. Find all the roots of the equation

$$(x + \sqrt{x^2 - 1})^n = 1.$$

II. If the lines bisecting the angles of a triangle ABC meet the opposite sides in D, E, F, prove that the area of the triangle DEF is

$$2r^2 \cos\tfrac{1}{2}A \cos\tfrac{1}{2}B \cos\tfrac{1}{2}C \div \cos\tfrac{1}{2}(B - C) \cos\tfrac{1}{2}(C - A) \cos\tfrac{1}{2}(A - B).$$

III. C is the centre of curvature at a point P of a cardioid, CY is drawn parallel to the tangent at P, meeting the radius vector OP in Y, O being the cusp. Prove that YP is constant.

IV. Matter is spread along a straight line, so that its density at any point is inversely proportional to the cube of the distance from a certain external point. Show that its centre of gravity divides the line in the ratio of the distances of its extremities from the external point.

V. Two equal weights are fastened to the extremities of a string which is then hung over two small smooth pulleys A, B, in the same horizontal line. If a third equal weight be fastened at the middle of the horizontal portion AB of the string, show that it will descend a distance equal to two-thirds of AB, and find the velocity in any position.

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

PHYSICS:—[GENERAL PRINCIPLES OF PHYSICS AND SOUND.]

I. Describe some experimental methods of studying the composition of two simple Harmonic motions; and show by sketches some of the resultant motions when the components vary in period and in phase.

II. State briefly the doctrines of the Conservation and the Dissipation of Energy.

III. Explain how you would find the specific gravity of a heavy powder by means of the Thousand Grains Specific Gravity Bottle.

IV. Give a concise account of Plateau's Soap Figure experiments and what they prove Sketch some of the simpler figures obtained.

V. Explain the principle and working of the Hydraulic Ram, and the Fire Engine.

VI. Discuss the experimental proof of Boyle's law for pressures greater, also for pressures less, than one atmosphere. What are the limits to the law?

VII. Describe Helmholtz's Double Syren: and state the principal results obtained by Helmholtz with this apparatus.

VIII. (*a*) What are the relations among the notes of the diatonic musical scale?

(*b*) What is a *tempered* musical scale?

IX. Describe Helmholtz's apparatus for the synthesis of vowel sounds: and state some of the results obtained by this apparatus.

X. Discuss the theory of Beats in Music. How would you experimentally illustrate the subject of Beats?

MONDAY, 19TH JANUARY, 2 TO 5 P M.

PHYSICS [HEAT AND LIGHT.]

I. Describe the experimental method of determining the coefficient of absolute expansion of mercury and explain the importance of this constant.

II (*a*) How is the tension of aqueous vapour determined between 0° and 100°C?

(*b*) Explain how a table of such aqueous tensions is used with a Daniell's or Regnault's Hygrometer to calculate the hygrometric state of the air.

III. State any familiar phenomena that illustrate the physical principle that diathermancy varies with the nature of the source of heat.

IV. What is meant by atomic and by molecular heat? Give the laws which connect these respectively with atomic and molecular weights.

V. Explain how and why the specific heat of a gas at constant volume differs from its specific heat at constant pressure.

VI. Calculate the amount of heat developed when a cannon ball weighing 60 lbs. impinges against a target with a velocity of 500 feet per second.

VII. Describe the apparatus used by Foucault for the determination of the velocity of Light.

VIII. Deduce the formula connecting the distances of an object and its image after reflexion by a concave spherical mirror of radius r: how is the formula modified to include reflexion from a convex mirror? Deduce from the formula how the image changes in each case with the position of the object.

IX. Give a concise explanation of the phenomena known as the Colours of Thin Plates.

X. Describe and explain the theory of a Nicol's prism. Show by a sketch in what plane the light is polarized by a Nicol's prism.

XI. Explain shortly but clearly how we may calculate the wave length corresponding to any particular solar line by means of a diffraction grating.

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

PHYSICS: [ELECTRICITY AND MAGNETISM].

I. The Horizontal component of the Earth's magnetism at Greenwich for the year 1877 was 0·18079 of a dyne. Explain clearly the meaning of this, and give the different steps of the calculation by which this is obtained.

II. Describe concisely the Holtz Electrical Machine, and give a theory of its action.

III. Give a short account of the essential features of Thompson's Absolute Electrometer.

IV. How should a battery of 20 cells, each having a resistance of $\frac{1}{5}$ ohm be arranged so as to give greatest current strength?

V. Explain the general principle of Wheatstone's bridge: and give a sketch of any practical form of the instrument.

VI. State the distinctive peculiarities of the Gramme Magneto-Electric machine.

VII. What are the *extra-currents* of an induction machine? How do they act on the principal currents?

VIII. Describe Faraday's experiment whereby a magnetic pole may produce continuous rotation of a wire conveying a current: and explain how this rotation accords with the fundamental laws of Electro-dynamics.

IX. Define the ohm, the volt, the ampere, and the coulomb.

X. Explain as concisely as possible the fundamental principle of Duplex Telegraphy.

TUESDAY, 20TH JANUARY, 2 TO 5 P M.

CHEMISTRY.

I. Write a historical sketch of the investigations that have been made upon Ozone, describing the best apparatus for preparing it in large quantities and the methods by which a definite knowledge of its constitution has been arrived at.

II. What is Hydrogenium? Give some account of its preparation and its properties.

III. Give a list of the Oxides and oxyacids of Chlorine and describe one of each in detail.

IV. What are "leaden chamber crystals"? How are they formed, and what is the action of water on them?

V. What is the action of:—

(1) The electric discharge on dry air.

(2) Chlorine on marsh gas.

(3) Iodine on an aqueous solution of ammonia.

(4) Heat on Ammonic Chloride.

VI. Explain—giving examples—the terms normal salt, acid salt, and basic salt.

VII. Give some account of the manufacture of porcelain with special reference to the Chemistry of the process.

VIII. Describe the chemical operations used in the production of photographs by any of the processes ordinarily used.

IX. How is pure metallic platinum obtained from its ores?

X. Describe briefly the useful applications of spectroscopy to Chemistry.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

ORGANIC CHEMISTRY.

I. Describe briefly the properties and chemical relations of the class of *Amines* and some processes by which the primary Amines may be obtained.

II. Define the Class of compounds termed *Aldehydes*, and describe two Aldehydes of the series $C_n H_{2n} O$ and their halogen derivatives.

III. Explain the chemical constitution of *Phenol*; state how this substance is obtained and for what useful purposes it is employed?

IV. Describe the chemical changes which take place (1) in the preparation of malt, (2) during vinous fermentation, (3) in soap-making.

V. Explain briefly the constitution of the following compounds: Cacodyl, Urea, Oxamide, Glycerin, Methyl Cyanide.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

CHEMISTRY.

I. Give qualitative tests for Phosphates in solution, distinguishing Pyro-and Meta-from Ortho-phosphates.

II. Describe methods for determining the presence and quantity of Potassic Hydrate mixed with Potassic Carbonate.

III. A substance has the following percentage composition:—

C	20·00
H	6·66
N	46·67
O	26·67
	100·00

what is its empirical formula? Give names and graphic formulæ for two isomers of this composition.

IV. Describe a method of determining vapor densities; and explain the importance of such determinations in ascertaining the rational formulæ of compounds.

V. State a process for the estimation of Quinine in Cinchona bark.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

LABORATORY—ORGANIC CHEMISTRY AND QUANTITATIVE ANALYSIS.

I. Estimate the Nitrogen in substance A. This body readily yields all its N in the form of NH_3

II. Ascertain the percentage of silver in solution B.

III. What weight of Chlorine is contained in half a litre of solution C?

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

GEOLOGY.

I. Define the terms:—Rock, Dip, Strike, Basset, Hade, Conglomerate, Breccia, Clunch, Homotaxis.

II. Explain concisely and distinguish between the following phenomena:—(*a*) Lamination, Foliation and Rock-cleavage; (*b*) False bedding, Overlap, and Unconformability; (*c*) Anticlinal, Synclinal and Periclinal strata.

III. What are "Raised beaches"? Explain their method of formation, give examples, and state what inferences may be drawn from their positions and fossil remains.

IV. Enumerate the principal Limestones and refer each to its proper geological position. Give the characteristic fossils of any *one* of them.

V. "Coal is a product of all periods." Examine this statement and describe fully any typical coal-field *not* assignable to the Carboniferous Epoch.

VI. Discuss briefly the origin of:—Rock-basin Lakes; Stalactites and Stalagmites; Travertine; Serpentine.

VII. On what grounds is it believed that Trachyte, Felsite and Granite are often only different conditions of the same igneous rock?

VIII. Of what geological formations are the following fossils respectively characteristic:—Ananchytes ovatus; Eozöon canadense; Pentamerus knightii; Gryphœa incurva; Cephalaspis Lyelli; Sivatherium? Describe succinctly any *one* of those formations.

IX. Give some account of the Salt Range of India and explain how beds of Gypsum and Rock-salt have been produced.

X. Determine the Geological positions of the following deposits:—(*a*) Millstone Grit; (*b*) Tremadoc Slate; (*c*) Weald Clay; (*d*) Cuddalore Sandstone; (*e*) Marl Slate; (*f*) Coral Rag; (*g*) Rhœtic Beds.

XI. Describe the phenomena of Earthquakes: explain the theory of seismic waves, and state briefly their secondary effects on sea and land.

XII. Name and describe the specimens placed before you. Quote the number assigned to each specimen before you proceed to identify it.

FRIDAY, 23RD JANUARY, 2 TO 5 P. M.

MINERALOGY.

I. Define the term "Specific Gravity." How would you determine the Specific Gravity of (*a*) a solid mineral; (*b*) a mineral soluble in water; (*c*) a porous mineral or a powder? Give examples.

II. Expound the laws of crystalline cleavage, and explain what is meant by "Hemihedral" and "Holohedral" forms.

Describe the crystal whose symbol is $\infty\ o\ .\ \infty\ o\ \infty$ (Naumann) or 011·100 (Miller.)

III. Explain and exemplify the distinction between Paramorphs, Endomorphs, and Pseudomorphs.

IV. To what crystallographic system do the following minerals belong:—

Topaz; Blue Vitriol; Galena; Cinnabar; Cassiterite; Malachite? Name the elements of which they are severally composed.

V. State the principal characteristics of Apatite. How is it distinguished from Beryl, Calcite, and Pyromorphite respectively? What is Coprolite?

VI. What do you understand by (*a*) Isomorphism; (*b*) Paragenesis; (*c*) Trimorphism; (*d*) Allotropism; (*e*) Dichroism? Give examples of each phenomenon.

VII. How should you distinguish from each other colourless crystals of Quartz, Dolomite, Aragonite, Anhydrite?

VIII. Explain the mineral origin and manufacture of the following articles of commerce:—"White lead"; "Venice white"; "Red lead"; "Black lead pencils"; "Plaster of Paris."

IX. Enumerate the principal ores of Zinc, and describe fully any *one* of them.

X. Prove that Iron pyrites, Gold, and Copper pyrites can be readily distinguished from each other. In what rocks would you expect to find Gold and with what minerals would it probably be associated?

XI. What are Meteorites? Indicate their commonest mineral constituents, and give reasons for believing that 'meteoric bodies in space are in general without an atmosphere like ours, although not wholly destitute of Oxygen'?

XII. Name and describe the structure of the specimens placed before you. Quote the number assigned to each specimen before you proceed to identify it.

SATURDAY, 24TH JANUARY, 10 A M. TO 1 P M.

PALÆONTOLOGY.

I. State concisely what you know about the general succession of organic types from the earliest recognized forms up to the present day.

II. The Palæontological record is admittedly imperfect; state some principal causes for its being so.

III. Mention some important formations which consist largely of animal remains, other than *corals*. Describe briefly some of the principal genera found, and give some information as to the geographical distribution of such rocks, especially with reference to India.

IV. Describe the genus Oldhamia, and give its position in the zoological scale and in geological time.

V. Give the zoological position and the distribution in time of the three orders Crinoidea, Cystoidea, and Blastoidea, and further point out their chief points of difference from each other.

VI. Describe the genus Estheria, giving fully its position in the zoological scale. Mention what geological formations the genus is characteristic of.

VII. Describe the genus Hippurites. What geological period is it peculiar to? Has it been found in India, and, if so, where?

VIII. Describe the genus Belemnites. Mention its distribution in time. In what Indian formations has it been found?

IX. Name the great extinct orders of Reptilia, and give a brief sketch of their structural characteristics, and of their distribution in time.

X. Explain as fully as you can the formation of Coal.

XI. Name and give the botanical affinities of the principal fossil plants of the Permian system.

XII Name (at least generically) the fossils placed before you. Quote the numbers on them.

N.B.—A high value will be assigned to any sketches or diagrams in illustration of the answers.

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

SUBJECT OF ESSAY.

Glaciers,—their formation, work, and geographical distribution. (Illustrate by diagrams wherever possible.)

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

STRUCTURAL BOTANY.

I. What are the principal forms of indefinite *inflorescence?* Give examples from Indian species.

II. Describe the two plants marked A. and B., and refer them to their natural order.

III. Give instances of Indian plants with *prickles, thorns,* and *tendrils,* and state in each case what parts of the plant these are modifications of.

IV. Name Indian plants, which produce *fruits* of the following types—*Legume, drupe, caryopsis, samara, berry, siliqua, capsule, follicle, achene.*

V. Define the following terms—*cystolith, prosenchyma, procambium, lenticels, trichomes, cormophyte, vernation, pulvinus, involucre.*

MONDAY, 19TH JANUARY, 2 TO 5 P.M.

PHYSIOLOGICAL BOTANY.

I. Which end of the spectrum is said to be most potent in the formation of chlorophyll? Describe any experiment which bears upon this question.

II. What is meant by the expression "growth by the *intussusception* of new particles"? Explain how on this theory starch is formed.

III. A green leaved plant can obtain from inorganic substances all that is necessary for the growth of its tissues. Can a mushroom? If it cannot, how then does it obtain its necessary nourishment?

IV. What is *Inuline?* In what plants does it chiefly occur?

V. When a plant dies it rots and becomes changed into earth. By what agencies is this transformation effected?

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

BOTANY: DEVELOPMENT.

I. Give a short account of the life-history of any *one* of the following plants, illustrating your description by means of drawings if you can:—

1. Bacterium, 2. Protococcus, 3 Mucor, 4. Equisetum.

II. Give a progressive account of germination in the *Castor-oil* seed, and state clearly how the reserve materials are utilised by the embryo.

III. Describe the chief modifications of a sexual reproduction, and mention any Indian plants that afford an example of each.

IV. What is the difference between *free cell formation* and *cell-division*, and in what parts of the plant do they respectively occur?

V. Describe the structure of the *punctum vegetationis* and show how it becomes developed into a branch bearing leaves.

TUESDAY, 20TH JANUARY, 2 TO 5 P M.

BOTANY: ECONOMIC, GEOGRAPHIC AND HISTORICAL.

I. Give the botanical source of the more important oils of India.

II. What are the chief economic products of the following natural orders?—

Cruciferæ, Labiatæ, Coniferæ, Gramineæ.

III. What are the great starch producing plants of the world?

IV. Contrast the Flora of the *Temperate Himalaya* with that of the more arid climate of *Madras.*

V. What existing species most resemble those which flourished in the coal measures?

VI. Write a short account of any one of the following botanists, *John Ray, Nehemiah Grew, A. L de Jussieu, A. P. de Candolle,* showing where they lived, and in what branches they advanced botanical science.

VII. Give a short account of the labours of *Linnæus* and explain how it is that his "System" does not fulfil the requirements of modern botanists.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

ZOOLOGY.

I. Give the general characters of Insects and describe their nervous and respiratory systems. Write an account of the order *Coleoptera.*

II. Describe the external appearance and organs of the star-fish (Asterias)

III. Give instances of Rodents. Describe the character, structure, and mode of growth of the incisor teeth in this order. Describe also the temporo-maxillary articulation.

IV. Describe the foreleg of a ruminant and shew its homologies to the upper extremity of man. Illustrate your answer by a sketch.

V. Classify the following animals :—Dolphin, dugong, tiger, cow, guinea-fowl, owl, turtle, cobra, frog, shark, spider, centipede, earth-worm, cuttle-fish, snail, sea-urchin, hydra, amœba, and give the scientific names of any six of them.

VI. What is meant by the term "corallum"? Describe the scleroderme variety, name its several parts, and also those soft parts by which they are secreted. Describe the three kinds of coral reefs.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

ZOOLOGY.

I. Describe the development and structure of a feather.

II. In which class of the Ichthyopsida would you place the *ceratodus* and *lepidosiren annectens?* What points have these creatures in common with the Ganoides? What are the structural peculiarities of the Dipnoi as regards their skeletons, limbs, organs of respiration, digestive system, nervous system and organs of circulation?

III. Name the bones and describe the movements and dentition of the maxillæ of the Cobra.

IV. Give in detail the life-history of a tapeworm. Describe the anatomy of the adult Taenia. Mention the points which distinguish the varieties of the adult Taeniada from each other.

V. Give the dental formulæ of the Equidæ and Ruminantia. Discuss the nomenclature of the teeth in the latter, and name the animals in this group which exhibit departures from the type. State the nature of the deviation in each of these animals.

VI. Describe the structure and position of the reproductive organs, male and female, in each of the natural orders of the Mammalia. What purposes are served by the different deviations in these respects from the type?

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

ZOOLOGY.

I. Give instances of pulmo-branchiate and branchiferous gasteropods, and point out the difference in the structure and arrangement of their respiratory organs.

II. Give the general characters of Rhizopods, the various orders into which this class is divided, and cite instances of each order.

III. Describe the common hydra, its organs of prehension, its digestive cavity, and its modes of reproduction. Refer this animal to its class and order.

IV. Describe the *tubipora musica* and state to what family, order, and class it belongs.

V. Show succinctly the variations in the structure of the forelimb in the following animals: bat, whale, horse, eagle, and fish, compared with the structure of the upper extremity of man. A sketch, showing the variations, should accompany your description.

VI. Describe the order Foraminifera and give instances of monothalamous and polythalamous shells. Illustrate these by sketches.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

PALÆONTOLOGY.

I. Define "a fossil" and describe the different states in which organic remains occur imbedded in the rocks. What do you understand by fossilization by replacement? Give illustrative examples of the process.

II. What inferences do you draw from the fossil Fauna and Flora found in the Eocene and Pleistocene deposits of Western Europe as to the climates which prevailed during the formation of those rocks? Name the genera on whose presence you found your conclusions.

III. Name the principal types of the Carboniferous Flora, and mention briefly their botanical affinities.

IV. Describe and illustrate diagramatically the structure of the corallum of the Zoantharia, Sclerodermata, and Rugosa, respectively. Explain also the formation of compound corals.

V. Name some of the principal genera of the order Rugosa and state what is their distribution in time.

VI. Give a sketch of the Morphology of a typical Echinoid and illustrate it by diagrams. Name some of the genera typical of the Jurassic and Cretaceous periods.

VII. What are the chief points of difference between the Brachiopodous and Lamelli Branchiate Mollusca. Name some genera of Brachiopoda peculiar to the Palæozoic rocks.

VIII. Name the leading genera of Tetrabranchiate Cephalopoda, and state their distribution in time. Give examples of some genera which occur both in Europe and India.

IX. Give some account of the distribution in time of the Class Pisces.

X. Name the earliest known bird and the formation it was found in. Describe its leading osteological peculiarities, and state to what avian order it has been assigned.

XI. Give a list of the principal Vertebrata discovered in the Sewalik beds of Northern and Western India, or else a list of the Mammals which inhabited Britain during the Post-Glacial epoch.

XII. Name (at least generically) the fossils placed before you. Quote the numbers they bear.

N.B.—A high value will be assigned to sketches or diagrams in illustration of the answers.

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

ANIMAL AND COMPARATIVE PHYSIOLOGY.

I. Describe the structure and composition of the Animal *ovum*. Show the relation generally existing between its composition, size, and mode of segmentation.

Give an account of the *Germinal layers*, and write out a list of the organs derived from each of them.

II. Describe the organ of hearing which is possessed by all true Vertebrata, and its mode of development. Show how from this simple organ the essential and accessory parts found in Mammalia have been developed. Give some account of the means by which we have discovered the functions of each of these parts, and state what these functions are.

III. Describe and illustrate by diagrams the origin and mode of growth of the *Amnion* and *Allantois*, and compare the functions of the latter in birds and mammals.

IV. State the conditions on which the production of *voice* essentially depends. Describe the mechanism by which these conditions are fulfilled in man. How are the pure vowel sounds produced? To what extent is the existence of the tongue necessary in speaking?

V. Describe the structure of the *arteries*, large and small. State the functions of their coats. Give an account of the nerves which supply them, and mention instances in which these nerves are brought into action.

VI. Enumerate the *Protective structures* which are derived from the Epidermis of the Vertebrata.

FRIDAY, 23RD JANUARY, 2 TO 5 P M.

ANIMAL AND COMPARATIVE PHYSIOLOGY.

I. Describe the Mammalian *retina*. Mention the portion which is sensitive to light, and give the evidence on which your statement rests. How does the retina originate?

II. Describe the minute structure of a *true lymphatic gland*, and trace the course of the lymph and blood currents through it. Mention its probable functions, and the animals in which it occurs.

III. Give the evidence for and against the theory of *localization of function* in the cerebral surface.

IV. Enumerate the *products* of Mammalian digestion. Describe the agencies which produce them, and those which cause them to disappear from the alimentary canal. State the courses taken by each of them on leaving the canal, and the further changes which they undergo in the system so far as known.

V. The velocity of a *nerve current* is said to be about thirty metres a second. Describe, in detail, the experiments by means of which this knowledge has been obtained.

VI. Explain the term *Protective Resemblance*. Account for its existence, and give examples of it in insects, reptiles, and birds.

SATURDAY, 24TH JANUARY, 10 A.M TO 1 P.M.

ANIMAL AND COMPARATIVE PHYSIOLOGY.

I. Discuss the mechanism of the erect posture, (*a*) in the man, (*b*) in the foreleg of the horse. Account, anatomically and physiologically, for the fact that the horse while standing, and the sloth while suspended from a branch, may enjoy almost complete rest.

II. Where is the respiratory centre situated in the Vertebrata? Is it single or double? Is its action *reflex* or *automatic*? Give the evidence, experimental or otherwise, upon which your opinions are founded.

III. Describe the mechanisms by which the accommodation of the eye is accomplished, and the methods of accurately determining them.

IV. State concisely the effects of the following procedures, (*a*) on the respiratory movements, (*b*) on the action of the heart:—

i. Section of one Phrenic nerve.

ii. Section of both Phrenic nerves.

iii. Section of the Vagus nerve.

iv. Stimulation of the Central Stump of the divided Vagus.

v. Section of the Spinal Cord below the origin of the seventh cervical nerve.

vi. Section of the Cord just below the medulla oblongata.

vii. Removal of the brain just above the medulla oblongata.

viii. Longitudinal section of the medulla oblongata in the middle line.

(*a*) section of one Vagus in addition.

V. Explain the terms "currents of rest," "currents of action," "negative variations," as applied to muscle currents. How would you demonstrate the phenomena included under these terms?

VI. Contrast the physical condition of fresh muscle with that of muscle in *rigor mortis*. How would you prepare myosin in the free state? What are the properties of this substance?

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

SUBJECT OF ESSAY.

The Vertebrate Embryo.

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

PSYCHOLOGY—HAMILTON AND MILL.

I. What is Philosophy? State and criticize the views of Hamilton as to

(*a*) its nature and scope;

(*b*) its utility;

(*c*) its method.

II. Compare from both the physiological and the psychological point of view the "Relativity of Knowledge" in the sense in which it is used, say, by Hamilton, with its use by Dr. Bain. Which of the senses do you regard as the more general?

III. In connexion with the controversy regarding "Innate Ideas" examine the distinction approved of by Hamilton between their "origo" and their "exordium."

How would Mill and Experientialists generally deal with this distinction?

IV. For the purpose of bringing out the differences between a psychological, a cosmological, and an ontological question, take the problem of Causation and discuss it successively in each of those three aspects.

V. When Hamilton alleges that the various systems of philosophy arise from the total or partial acceptance or rejection of the testimony of consciousness is he or is he not historically correct? Discuss the question.

VI. What are the precise differences between the six leading cosmological theories?

Under which of these theories, if under any, would the following writers be ranged respectively, namely, Arnauld, Hume, Berkeley, Reid, Brown, Hamilton, Mill and Mr. Spencer? Give reasons for your answer.

VII. Compare the Aristotelio-Hamiltonian theory of Pleasure and Pain with the Platonico-Kantian, and both with Dr. Bain's Law of Self-conservation; and estimate their respective merits and demerits in the light of the phenomena they are intended to explain.

What is the connexion between the Law of Pleasure and Pain or Self-conservation, on the one hand, and the Law of Motives to the Will, on the other? Which do you consider the more fundamental in the human constitution?

VIII. Speaking of his own theory of mind, which he admits to contain a paradox, Mill says:—

"The truth is, that we are here face to face with the final inexplicability, at which, as Sir W. Hamilton observes, we inevitably arrive when we reach ultimate facts; and in general, one mode of stating it only appears more incomprehensible than another, because the whole of human language is accommodated to the one, and is so incongruous with the other, that it cannot be expressed in any terms which do not deny its truth. The real stumbling block is perhaps not in any theory of the fact, but in the fact itself."

Later on, when speaking of Hamilton's theory of Pleasure and Pain, Mill says :—

"Our author is more than half aware that his theory breaks down when applied to pleasures or pains that are heterogeneous to one another." But "he lays the responsibility of the failure, not upon his theory, but upon the general inexplicability of ultimate facts." "This appears to me a great misconception on our author's part of what may rightfully be demanded of a theorist. He is not entitled to frame a theory from one class of phenomena, extend it to another class which it does not fit, and excuse himself by saying that if we cannot make it fit, it is because ultimate facts are inexplicable." It is not philosophical to propound a theory "and fall back upon the incomprehensibility of the subject as a dispensation from proving it."

Discuss the points raised in these extracts. In particular reply to the following question, namely :—Would it be competent to retort on Mill that he frames a theory from one class of phenomena (matter), extends it to another class of phenomena (mind) which it does not fit, and excuses himself by saying that if we cannot make it fit it is because ultimate facts are inexplicable?

IX. Discuss the doctrines of Free Will, Determinism, and Fatalistic Necessity.

What theory is adopted by Hamilton? Examine the grounds on which he advocates it.

X. Unlike some of the German Transcendentalists, Cousin held that the Absolute is known under the ordinary conditions of knowledge.

What objection does this expose Cousin to from Hamilton, and how does Mill deal with Hamilton's objection?

XI. What is the psychological character and evidentiary value of that "Belief" or "Faith" which Hamilton sets over against "Knowledge"?

MONDAY, 19TH JANUARY, 2 TO 5 P.M.

SPENCER'S PRINCIPLES OF PSYCHOLOGY.

I. In a review of Professor Bain's 'Emotions and the Will,' Mr. Spencer says: "We cannot better express our sense of its worth than by saying that, to those who give to this branch of

Psychology a thoroughly scientific organization, Mr. Bain's book will be indispensable." Shew how far Mr. Spencer has succeeded in giving to the subject this scientific organization.

II. (1) Feeling is the substance of which, where it is present, Intellect is the form.

(2) The evolution of Instinct is due to two causes acting singly or in combination—natural selection and lapsing intelligence.

Explain the above.

III. "Every central nervous process to the very lowest, has, in and for itself, its proper psychical phase as much as the highest."

What is Mr. Spencer's view on this question? Discuss it fully. Bring out Mr. Spencer's view on the vexed question of the possession of consciousness by the lower animals. What is your own view on the question? If you are for the affirmative, how far down in the scale of animal life will you admit the presence of mind?

IV. Describe clearly the part played in the development of mind by the principle of hereditary transmission. How is the transmission effected and realised in the offspring? If heredity is the rule, how will you account for family or individual peculiarities not generally reproducing themselves in offspring?

V. Shew how Contiguity may be resolved into likeness of relation in Time or in Space or in both? What, according to Mr. Spencer, is the ultimate law of association? Compare his view with the views of Professor Bain and Sir W. Hamilton on this question.

VI. Describe (*a*) the probable process by which nerve-tissue arises out of protoplasm, and (*b*) the evolution of the higher co-ordinations out of the lower ones, and the progressive complication of the structure of the nervous system so as to achieve them.

VII. Sketch Mr. Spencer's analysis of the notion of time. Name all the circumstances regulating our appreciation of duration; and account for the following:—

(1) The latter half of a journey by the railway seems longer than the earlier half.

(2) Certain narcotic drugs make time appear enormously long.

(3) In retrospect life seems no longer at forty than it did at twenty.

VIII. Describe briefly the genesis and development of the Æsthetic sentiments.

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

MILL'S LOGIC.

I. Mr. Mill has introduced a radical innovation into the Definition and Province of Logic. Explain this by comparing his treatment of the subject with that of previous logicians.

II. (*a*) Explain what is meant by the statement, that the "Class-inclusion" theory of the Import of Proposition involves a *hysteron proteron.*

(*b*) Mill affirms and Bain denies that the affirmation (or denial) of *existence* is one of the forms of the Import of Proposition. Discuss this.

(*c*) According to Mill *real* propositions imply the existence of their subject. How?

III. (*a*) What objection is there to limiting Definition to the Scholastic form of it, viz. *per genus et differentiam* ?

(*b*) If, as Mill holds, all definitions are of names and not of things, what is his distinction between *nominal* and *real* definition?

IV. Hobbes held that the truths of Mathematics are deduced from the definitions. Now since definitions are merely verbal propositions, it would follow that, either there is no objective truth in Mathematics, or that a system of objective truth may be derived from mere arbitrary conventions.

How does Mill deal with this difficulty?

V. Mill says: "The *Dictum de omni* should be retained as the fundamental axiom of *formal* logic; but the other is the proper axiom for the logic *of the pursuit of truth by way of Deduction.*" Explain this by distinguishing between these two forms of Deductive reasoning otherwise called Demonstration and Ratiocination. What is the other form of the axiom alluded to?

VI. According to Mill, the syllogism, as ordinarily viewed, is a

Petitio Principii. He accordingly proposes a new view of its nature and functions for the purpose of obviating this charge.

Discuss this point

VII What is meant by Colligation of Phenomena? Explain the dispute between Whewell and Mill as to (1) the nature of the process of Colligation, and (2) its relation to Induction.

VIII. (*a*) Point out the several respects in which Mill's notion of Cause differs from the popular conception of it.

(*b*) Bain considers that the discovery of the principle of the Conservation of Energy introduces a great advance in the mode of viewing Causation, whereas Mill is of opinion that it makes no change therein.

Discuss this point.

IX If the Inductive methods are based upon the law of Universal Causation, and if the method of *Inductio per simplicem enumerationem* be, as Mill calls it, a precarious and unscientific method, how can Mill be freed from the charge brought against him by Jevons of holding the paradox that a rigorously scientific method may be based on one that is unscientific?

X. (*a*) Of the five experimental methods, show which are fundamentally different and which are only modifications of others.

(*b*) Why is the Joint method called the Indirect method of Difference? How does it differ from the Direct method? Why is it not baffled by Plurality of Causes? What is its defect?

XI. State Mill's general Canon of Disbelief, and point out how it must be modified (rendered more or less absolute) according to circumstances. State and criticise in this connection Hume's argument against the credibility of miracles.

XII. Explain what is the Fallacy of Confusion. Illustrate its three varieties by exposing:—

(1) The fallacy of Achilles and the Tortoise.

(2) The fallacy that lies at the basis of Hobbes' Ethics.

(3) The fallacy of the popular argument against Idealism.

TUESDAY, 20TH JANUARY, 2 TO 5 P.M.

LOGIC: JEVONS' PRINCIPLES OF SCIENCE.

I. From the law that "where the denotation or extension of a name increases, the connotation or comprehension diminishes" does it follow that every increase in the human population of the world must be accompanied by a diminution of the meaning of the name "man"?

II. How would Jevons express symbolically the four propositional forms of the ordinary logic?

Write the following of Jevons' forms of inference in the ordinary syllogistic forms:—

(1) $B = A$	(2) $A = B$
$B = C$	$B = BC$
$\therefore A = C.$	$\therefore A = BC.$
(3) $A = AB$	(4) $B = AB$
$B = BC$	$B = CB$
$\therefore A = ABC.$	$\therefore AB = CB.$

III. Do you think Jevons is justified in making the following remark?—

"Not only does Mr. Mill treat the Laws of Causation as almost coextensive with science, but he so uses the expression as to imply that, when once we pass within the circle of causation we deal with certainties."

Support your answer by reasons. If you think the remark is not justified, state whether there is anything in Mill's *Logic* to give a colourable pretext for it.

IV. Compare the views of Jevons with those of Mill as to the position of Deduction in scientific enquiry.

V. Mention the fundamental standard units of measurement required by science, and the units that have actually been proposed to meet those requirements. Mention the chief difficulties met with in the attempt to determine and perpetuate a standard unit.

VI. By what methods does the scientific investigator seek to separate the effect he is studying from the complication of effects that exists in nature?

VII. What value is to be attached to the non-observation of a phenomenon and to the negative result of an experiment?

VIII. If the conclusion you deduce from an hypothesis is not in accordance with the facts which the hypothesis has been devised to explain, what course or courses would you adopt?

Is "Prevision the test of true theory"?

IX. What are exceptional phenomena? How do you account for "the high scientific importance" which attaches to them? Give exemplifications of any two of the classes of exceptional cases mentioned by Jevons, and show how they are to be dealt with.

X What does Jevons mean when he says that the primary purpose of classification is "to disclose the correlations or laws of union of properties or circumstances"? What kind of classification will best effect this purpose?

What are the advantages and disadvantages of bifurcate classification when applied to the Natural History Sciences?

[*Answer either, but not both, of the following*]

XI. Write short notes expository and critical on the following:—

(*a*) "So far as object is different from object, knowledge is useless and inference impossible. But so far as object resembles object, we can pass from one to the other."—*Jevons.*

(*b*) "There are many reasons for believing that the intensive or qualitative form of reasoning is the primary and fundamental one."—*Jevons.*

"The proper view of the syllogism, as of the notion and the proposition, is to base it on Extension, but to determine the extension by connotation or comprehension."—*Bain.*

(*c*) "In inductive just as in deductive reasoning, the conclusion never passes beyond the premises."

(*d*) "No number of particular cases as particular cases enables us to pass by inference to any new case."—*Jevons.*

XII. Jevons expresses his "strong conviction that before a rigorous logical scrutiny the Reign of Law will prove to be an unverified hypothesis, the Uniformity of Nature an ambiguous expression, the certainty of our scientific inferences to a great extent a delusion."

Explain what Jevons means by the above, and the conclusion he draws from it.

Granting the truth of Jevons' conviction, can anything be done, and if so, what, (1) to raise the unverified hypothesis of the Reign of Law to the rank of an established fact; (2) to get rid of the ambiguity attaching to the phrase "the Uniformity of Nature"; and (3) to convert our scientific inferences from probabilities to certainties?

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

SOCRATES AND PLATO.

I. Since Plato in his Dialogues has made Socrates the leading interlocutor and since Plato enunciates nothing in his own person, what means have we of discriminating between the contributions to Philosophy of Socrates and Plato, respectively?

II. Give some account of the *modus operandi* of Socrates as a teacher, and in connection with this, explain what has been called the "irony" of Socrates.

III. In describing his function as a philosopher, Socrates compared himself to his mother, who was a midwife. What theory of the origin of knowledge is implied in this comparison? How is this theory developed in the Platonic doctrine of "Reminiscence"?

IV. Aristophanes in his Comedies identifies Socrates with the Sophists by lowering the character of the former; Grote does the same thing by elevating the character of the latter. Examine which is right, or whether either is.

V. (*a*) Socrates first brought Philosophy down from heaven to earth."

(*b*) "Know thyself."

These quotations may be regarded as marking a new departure in philosophical speculation as introduced by Socrates. How? Protagoras taught that "Man is the measure of the Universe." Was the Socratic doctrine that self-knowledge lies at the basis of all true knowledge, the same as the doctrine of Protagoras above alluded to, or different?

VI. According to Aristotle, "To Socrates we may unquestion-

ably assign two novelties, *viz.*, Inductive discourses and Definitions of general terms."

(*a*) Are we to understand from this, that Socrates invented the Inductive method of Bacon and Mill, or what are we to understand by it?

(*b*) Show how the Socratic doctrine of knowledge by Concepts was developed into the Platonic doctrine of Ideas, and explain fully the latter.

VII. Enumerate the parts of the Soul in the Psychology of Plato and state their relation to the body respectively.

VIII. State the various arguments by which Plato seeks to prove the Immortality of the Soul.

IX. (*a*) According to J. S. Mill, the Socratic theory of the Moral standard is Utilitarianism. Examine this view, and state, with reasons, whether you agree with it or not.

(*b*) Examine whether, and how far, the apparently paradoxical identification of virtue with knowledge by Socrates is defensible.

X. In the Republic, Plato gives his theory of virtue (including a classification of the virtues) (1) as realised in the State, and (2) as realised in the individual. State his views in these respects.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

THE BRITISH INTELLECTUAL MORALISTS.

I. Give in chronological order the names of the writers whom you would include under the title of "British Intellectual Moralists." What is the signification of the term "Intellectual" as applied to them? Whence did they derive some of their most characteristic doctrines? What was the immediate impulse that drove them to moral speculation? Was their method of reasoning in harmony with the philosophical and practical movements of their day?

II. Expound and criticise the distinction drawn between "Nature" and "Will"; and more especially that made between the Divine Nature and the Divine Will. What ethical conclusions were deduced from the distinction?

III. How are Religion and Morality related in the scheme of the Intellectual Moralists?

What is your own opinion as to (1) the relation alleged by this school to exist, and (2) the arguments on which it is based?

IV. Do you find among the British Intellectual Moralists any doctrine which may be regarded as fore-shadowing the distinction made by Kant between the Categorical and Hypothetical imperatives? If so, state and expound it.

V. What use did the Intellectual Moralists make of the received distinction between the Primary and the Secondary Qualities?

VI. State and criticise the views of Clarke as to the ground of Moral Obligation.

VII. "Whatever," says Wollaston, "is inconsistent with the "general peace and welfare (or good) of mankind, is inconsistent "with the laws of human nature, wrong, intolerable."

What different interpretations would Intellectual Moralists and Utilitarians put on the above statement, and which interpretation do you think more in accordance with fact?

VIII. Compare the views of Wollaston and Hobbes with respect to the "State of Nature."

IX. Examine the maxim: "Act so that no truth may be denied by thy act."

X. Price maintains.

(1) that right and wrong are simple ideas.

(2) that they are immediately perceived.

(3) that the understanding is the power that perceives them.

Examine each of these statements.

XI. Is Price's admission of "somewhat instinctive" as auxiliary to the "intellectual discernment," consistent with thorough-going Intellectualism?

XII. Classify, assigning reasons, the leading doctrines of the Intellectual theory into

(1) those which, having only a special reference to the controversies of the day, are not of permanent value;

(2) those which are unsound :

(3) those which constitute a valuable and permanent contribution to ethical theory.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

POLITICAL ECONOMY.

I. (*a*) Illustrate the difference between wealth *in esse* and wealth *in posse*. Is this distinction covered by the ordinary definitions of "Wealth" and is it of importance to the theory of Political Economy ?

(*b*) Cairnes says "value" implies the conditions of utility, difficulty of attainment and *transferableness*. Explain *precisely* the meaning of the last term, and state your reasons for thinking it necessary and *not* redundant.

II Explain with care the different aspects under which Mill and Cairnes regard the phenomena of Demand and Supply. Is there any fundamental difference between the two writers ?

Does the phenomenon of over-production clash with the view Cairnes insists on ?

III. (*a*) What does Cairnes mean by "normal values" ? State the principles regulating these values and briefly explain their operation. Explain Adam Smith's and Ricardo's view of "natural values."

(*b*) Examine the special conditions influencing the standard of prices in retail trades.

IV. (*a*) Account for the fact that, with the increasing population in England, corn has shewn little or no tendency to rise *permanently* beyond "normal values," whereas meat has risen greatly in prices.

(*b*) "The price of corn in this country (England) has risen from 100 to 200 per cent. and upwards, when the utmost computed deficiency of the crops has not been more than between one-sixth and one-third below an average, and when that deficiency has been relieved by foreign supplies." How would you account for this ?

V. (*a*) An analysis of the conditions determining the Wages' Fund in a country reveals the operation of *three* distinct causes. State what these are.

(*b*) "A constant growth of the national capital is accompanied with a nearly equally constant decline in the proportion of this capital which goes to support productive labour." Point out the two chief considerations on which such a statement is based. What are the chief social and economical results that are likely to issue from the continuance of such a state of things? Describe, without discussion, some of the principal remedies that have been suggested in order to check this tendency.

VI. (*a*) Under what circumstances may wages rise and prices fall?

(*b*) Wages are paid in the last resort out of products. Improvements in production cheapen the price of the specific commodity sold. May we infer from this that progress in industrial methods conduces to the lowering of wages and is unfavourable to the labourer?

VII. (*a*) Show why it is that a combination among capitalists to force down wages is not likely to be *permanently* successful.

(*b*) Examine the economic aspects of Trades Unionism in its effects on international trade.

VIII. Two countries trade with one another, in *one* of which both the articles of exchange can be produced more cheaply than in the other. Under what circumstances is trade possible?

IX. Cairnes says, "It is the condition of the United States remaining a solvent nation that her exports should be made to exceed her imports." Does not this in some measure justify a policy of protection?

In discussing the economical condition of the United States, Cairnes takes no notice of the large number of immigrants from the United Kingdom and the Continent, who, it has been ascertained, bring with them considerable sums of money. Estimate the probable effects of this immigration on the rate of wages and America's financial position.

X. With what object is cooly labour exported from India to Trinidad? Explain the conditions of industry there prevailing which render such a course remunerative. Will the *high* rate of wages paid to the coolies in Trinidad affect the rate of wages in India?

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

POLITICAL ECONOMY.

I. (*a*) A has a landed estate and Rupees 2,000 a month, the whole of which he spends unproductively; but at last, having given notice to his tradesmen, he reduces his personal expenses to Rupees 1,000 and spends the remainder in hiring workmen and improving the productive powers of his estate. After the completion of one year, he abandons his work as useless, but commences anew on another plan which at the end of the year proves to be successful. How has (1) the 'fixed,' (2) the 'circulating,' capital in the country been affected?

(*b*) How far may the machine-breaking in the Luddite riots be justified?

II. Give a short account of the economical scheme connected with the name of Fourier, shewing how it is free from the objections that have been advanced against communism in general. What objections may be offered to the scheme?

III. (*a*) Enunciate and briefly establish Ricardo's "theory of rent."

(*b*) Dr. Whewell in criticising this theory says (1) it is of little comparative value because of its *limited* application; (2) that it can be of no practical importance even in the exceptional cases where it may be regarded as capable of practical application. Remark upon these positions either in justification or condemnation.

(*c*) How is it that in analysing the cost of production of manufactured articles no account is taken of "rent"?

IV. Mr. George in his "Progress and Poverty" recommends as a remedy for existing social and economic evils that the *earnings* should be given to the *earner*. The Duke of Argyll in criticising him, says that, as a landlord, he too should be regarded as a producer for he had spent £40,000 on his estate during four years. Criticise Mr. George's position and the justice of the Duke's claim.

V. (*a*) What is meant when it is said that a country gets its gold *cheap?* What other common phrase conveys the same meaning?

(*b*) Not very many months ago, gold was actually shipped from England to Australia. Examine *a priori* some of the conditions which would render such an occurrence intelligible.

VI. There are at present many complaints in England that the gold coinage owing to wear has greatly depreciated. What would be some of the most serious economic evils resulting from the continuance of a deteriorated currency?

In order to remedy this evil, Mr. Childers, the present Chancellor of the Exchequer, has suggested that, instead of issuing new sovereigns to meet the demands of the currency, a sufficient number of half sovereigns should be struck having an *actual* value of *nine* shillings but to be exchanged at their *nominal* value, *viz.*, two half-sovereigns for one existing sovereign. (1) What in your opinion was the immediate consideration dictating such a course? (2) Is there any ground for believing that the scheme, if carried out, would affect the money wages of labourers and prices generally?

VII. (*a*) A takes six months' leave which he spends in Australia. How would his stay there affect the commercial relations between Australia and this Presidency?

(*b*) If an English Company were to undertake the construction of a small line of railway in India—costing say £3,000,000—show clearly in what form or in what manner the capital would find its way to this country.

VIII. (*a*) A uniform income-tax on landlords has been condemned as unequal in its incidence and therefore unjust. Examine this criticism, stating with perfect fairness the arguments for and against this contention.

(*b*) The butchers of Madras lately went on strike, the Muni-

cipal authorities having imposed a fee on every animal slaughtered. Was the strike reasonable?

(c) In view of the present state of agricultural depression in England, "fair traders" have recommended the imposition of a duty of one shilling per quarter on imported corn, as they argue this duty would be paid out of the pockets of foreign importers. Do you uphold this view?

IX. The average balance of trade in England for the years 1874—1883 amounted to £115,000,000 in favor of imports, and it has been objected to this that "it encourages excessive consumption or a scale of comforts much beyond the means of the people to maintain and that, in so far as they consisted of articles grown in England, such as corn and meat, they lowered prices to such an extent, as to imperil great national interests." How would you reply to such a criticism?

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

ASSYRIA, MEDIA AND PERSIA.

I. Describe the constitution of the earliest Empires, and the condition of their subject States. Point out the peculiar strength and the weakness of this class of monarchies. How has the date of the commencement of the Assyrian Empire been determined? Give the ancient and modern names of the several seats of Assyrian government.

II. Furnish some information on the following points of Assyrian archæology:—

(a) The ancient sources of its history and chronology.

(b) The nature of its earliest records.

(c) The most important documents that have been discovered.

(d) The modes of writing that were in use among the people.

III. What was the extent of Assyrian dominion under Tiglath-Pileser II? At what periods, and under what circumstances, did Assyria oppress the kingdoms of Israel and Judah?

IV. How is the introduction of a new Assyrian dynasty marked? What led to the formation of the Lower Assyrian Empire? Summarise the chief events of the reign of Asshur-bani-pal.

V. Discuss (*a*) the testimony borne to the ethnic character of the Assyrians; and (*b*) the ethnic identity of the Medes and Persians. Herodotus and others represent the religion of the ancient Persians as elemental worship; Sir H. Rawlinson says it was the dualistic heresy which separated the Persian branch from their Vedic brethren. Can these two accounts be reconciled?

VI. In what locality does authentic history first find the Medes, and what was the extent of their subsequent empire? "The substitution of Persia for Media as the ruling power in Western Asia was due less to general causes than to the personal character of two men." (Rawlinson's Ancient Monarchies.) Show that this was the case.

VII. Enumerate the most important events ascribed to the reigns of Cyaxares and Cambyses.

VIII. State the circumstances that led to the accession of Darius? Sketch the main features of the satrapial system of government.

IX. How did the battle of Cunaxa affect the Persian power? What was the extent of the Persian Empire under Darius? It has been said that "all operations requiring intelligence were performed for the Persians either by Greeks or by Phœnicians." (Grote's Greece.) Verify this statement.

X. Relate briefly the leading incidents of the Ionic revolt from Persia.

FRIDAY, 23RD JANUARY, 2 TO 5 P M.

CONSTITUTIONAL HISTORY OF ENGLAND.

I. Mention the chief causes that enabled the Tudors to exercise an almost absolute power. How did the Court of Star Chamber strengthen the power of the Sovereign?

II. Give the various steps taken by Henry VIII and his Parliament, between the fall of Wolsey and the abolition of the smaller monasteries, which secured for the Church of England its freedom from the authority of the Pope.

III. "The Protestant religion could not easily have been established by legal methods under Edward and Elizabeth without the previous destruction of the monasteries." Show the truth of this statement, also whether or not the abolition of the monasteries was an unjust violation of the rights of property.

IV. What were the main subjects of contention between James I., and his Parliaments, and what led to the celebrated protest of 1621? In what important matters did the Parliament secure liberty for itself during this reign?

V. On what grounds did James I. base his right to interfere with the Courts of Law, and what was the position taken up by Chief Justice Coke with reference thereto?

VI. Wherein was the imprisonment of Darnell and Elliot and the execution of Vane contrary to Constitutional Law?

VII. What were the principal arguments used by the defence against the payment of Ship-money levied by Charles I? On what grounds was judgment given in favour of the Crown?

VIII. What were the main charges on which Lord Strafford, Lord Clarendon and Lord Danby were impeached? Examine the justice of these impeachments. What great principle was established in the impeachment of Danby?

IX. By what means, and on what grounds, was the Charter taken away from the City of London and other towns by Charles II? What steps did he thereupon take to strengthen his power?

X. (*a*) What was the constitution and jurisdiction of the High Commission Court?

(*b*) State briefly in what way Thomas Cartwright and Whit-gift are connected with Constitutional History.

(*c*) Explain the terms "Prerogative" and "Passive Obedience," and give a summary of the Habeas Corpus Act.

(*d*) Wherein does the English Episcopal Church differ in form, doctrine, and government from the Roman Catholic Church?

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

SUBJECT OF ESSAY.

With a view to bring out what is the smallest number of classes to which the phenomena of Mind can be reduced, examine whether the position assigned to the Will in the usual three-fold classification (Feeling, Intellect, Will,) be satisfactory (1) taking Dr. Bain's view of the Will, and (2) taking the Free Will conception of it.

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

SUBJECT OF ESSAY.

Party Government in its relation to Imperial interests.

B L. DEGREE EXAMINATION, 1885

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

LAW OF EVIDENCE.

I. In what sense have the authors of the Indian Evidence Act used the word "Evidence" as distinguished from the use of the word in England?

What is meant by "Material Evidence," "Direct Evidence," "Primary Evidence," "Secondary Evidence," "Circumstantial Evidence"?

II. Distinguish between an issue of fact and a fact in issue, and illustrate your answer out of the following case:

> *A*, a landlord, ousts *B* from the possession of a piece of land. *B* brings a suit against *A* to recover possession, alleging that he had been in possession under a permanent lease, and had been illegally ejected. *A* alleges that the permanent lease is spurious.

III. State with your reasons whether confessions made by *A* in the following circumstances would be receivable in evidence against him.

> *A* and *B* are two friends. *A* is supposed to have committed a theft. *B* says to him :—If you don't tell me the truth about this I shall inform the Police of what you did the other day, which you know will get you into trouble." *A* then confesses the theft and *B* is called to prove the confession.
>
> *A* and *B* are fellow-prisoners in jail. *A* is accused of robbery. *B* says "I'll swear I won't divulge it to any one, if you tell me that you really committed the offence." *A* then admits his guilt. *B* is ready to prove the admission.
>
> *A* is confessing a forgery to his legal adviser engaged to defend him on that charge. *B* a stranger overhears the confession and is called to speak to it.

A makes a voluntary confession of having committed an offence to a Police Officer in the immediate presence of a Magistrate

IV. By what means would you prove

(1) a point of Foreign Law,

(2) an inscription on the wall of a temple,

(3) an order of Government,

(4) an order of Government, if the original had been destroyed.

Is the copy of a copy in any case admissible?

V. Mention the three cases given in the Evidence Act of "conclusive proof." Give instances of other conclusive or irrebutable presumptions.

A Judge trying a case makes an entry at the end of a witness's deposition as to the witness's demeanour, stating that he coughed, shuffled about, turned pale, and so on. Can the Appellate Court take evidence from persons who were present in the Judge's Court at the time to contradict what he recorded.

VI. Give instances of an estoppel (1) by declaration, (2) by act, and (3) by omission.

VII. State the provisoes to the Rule that oral evidence cannot be received to contradict, vary, add to, or subtract from, the terms of a written instrument. What is the principle for deciding whether an ambiguity in a document may be explained or not?

VIII. In order to prove a public right of way, could the following be adduced in evidence, and if so, under what provisions of the law?—

(1) an entry in the Settlement Officer's descriptive account of the village, showing it as a public way:

(2) the pleadings in a suit between *X* and *Y*, both deceased, as to the partition of their family property, in which they expressly exclude the land over which the road passes through their estate, as being public:

(3) a writing of *Z's* a tenant on *X* and *Y's* estate, also deceased, in which it is stated that he had always considered the way was public:

(4) witnesses to state that they have constantly used it as a public way:

(5) witnesses to state that in their opinion it is a public way because they have seen others use it as such.

IX. In criminal trials can evidence not given in the presence of the accused person ever be used as evidence against him?

X. When may a legal adviser be compelled to disclose confidential communications made to him by his client, and when may a client be compelled to disclose such communications made by him to his legal adviser?

Are confidential communications made to professional, spiritual, or medical advisers privileged?

XI. Explain the meaning of the following terms: "Hearsay"; "Privy"; "Ancient document"; "Legal Memory"; "*ante litem motam*"; and *res gestæ*."

MONDAY, 19TH JANUARY, 2 TO 5 P.M.

CONTRACTS.

I. Contrast an obligation arising from a contract with an obligation arising from a family relation, from a tort or otherwise.

II. State the rules as to the person who may sue or be sued on a contract made by one person with another through the intervention of an agent.

III. Mention cases in English law and in the law of this country in which the adoption of certain forms gives what would otherwise be mere agreement the efficacy of contract.

IV. Advertisements appear in a newspaper, one announcing in the usual terms a reward for a lost or stolen article, the other announcing that the advertiser has certain property to offer for sale and is willing to receive tenders. Explain what elements, if any, of a contract are presented in these cases, and what further steps are required in either of them to bring about a complete contract.

V. At what point of time is a contract concluded, so as to make the proposal and acceptance irrevocable? Suppose (1) that the communication is *inter absentes* by letter (2) that it is *inter præsentes* by word of mouth.

VI. Under what circumstances can money paid for an unlawful purpose nevertheless be recovered by the payer?

VII. A man, having to pay a debt, gives his creditor a cheque drawn by himself. To what in point of law does this act amount, and what is the legal effect of it as between creditor and debtor?

VIII. In what cases is the buyer of goods entitled to refuse acceptance of goods tendered or to return them after receipt?

IX. State the general rule as to the assessment of damages for breach of a contract to deliver a given quantity of goods in instalments of so much a month.

X. A, living at Coimbatore, orders goods of Spencer and Co. to be sent to him by the Madras Railway. On the way the goods are damaged by exposure to rain. What is the test of liability, and who should sue for damages?

XI. What is the measure of the creditor's duty in disclosing facts material to be known to a surety?

XII. In January 1879 A, being 17 years of age, joins a Firm called X and Co. in which his father B and uncle C, were at the time the only partners. He brings in a sum of Rs. 1,000 as his share of capital. In January 1881 he retires from the Firm, and in June of the same year B dies: but the business is still carried on in the same name. S, having supplied goods to the Firm in 1878, 1879, 1880 and in February and July 1881, desires to sue for the amount. Against whom should he proceed and how far is each person liable? Would it make any difference that S never had any knowledge of A's connection with the Firm until it had ceased.

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M

TORTS.

I. State in which respects the liability of a person for defamation in an action of tort differs from his liability in a criminal prosecution.

II. State fully the distinction which the law draws in actions for libel and slander between "malice in law" and "malice in fact."

III. Is the malicious prosecution of civil proceedings against a person actionable? If so, what should be established in such an action, and if not, what is the remedy, if any, provided by law?

IV. Explain the cases of Langridge *v.* Levy, Gerhard *v.* Bates, and comment upon the decisions passed therein.

V. Discuss the principles of law which regulate the liability or non-liability of a person for the acts or omissions of servants employed for wages, of contractors employed by him, and of sub-contractors employed by him, and for injuries caused by his servant to a fellow-servant.

VI. Write a short note upon what constitutes a trespass upon real property and in what respects it differs from a criminal trespass.

VII. What are the rights in the nature of easements which cannot be acquired by prescription, and which of them, if any, can be acquired otherwise than by prescription.

VIII. Where one person transfers or bequeaths immoveable property to another, state the rules of law which regulate the rights of easement which arise on such transfer or bequest in favour of the transferee or legatee in other immoveable property of the transferor or testator, as well as those which arise in favour of the transferor or the legal representative of the testator in the subject of transfer or bequest.

IX. What is the extent of protection afforded by the Indian Law to Judicial officers and those who act under their orders against liabililty for acts done by them in the course of their official duties? Point out the distinction, if any, between the Indian and English law on the subject.

X. On what principles are damages assessed in actions of torts of different classes? State how far such principles are in conformity or otherwise with the rules which determine the measure of damages in actions for breaches of contracts.

XI. Point out the difference between absolute privilege and qualified privilege in actions for libel, and state fully the cases in which the privilege is absolute and those in which it is only qualified.

TUESDAY, 20TH JANUARY, 2 TO 5 P.M.

CRIMINAL LAW.

I. In what cases is it competent to the Court to punish an offender with forfeiture of property, and what are the two descriptions of forfeiture prescribed by the Indian Penal Code?

Is there any case in which a minimum term of imprisonment is prescribed as a punishment for an offence?

II. Enumerate the cases of culpable homicide which are excepted from the definition of murder

How are cases in which death is caused by personal injuries not likely or intended to cause death to be dealt with under the Indian Penal Code? Give instances illustrating your answer.

III. In what respects has the Indian Penal Code, as it originally stood, been modified by the Amendment Act in relation to offences against the State?

IV. What are the provisions of the Indian Penal Code in regard to the sentence to be passed upon offenders already convicted of other offences?

Is a person already convicted for theft committed in 1858 amenable to those provisions, as also a person convicted in 1882 of theft committed in 1879, who had already been convicted of theft committed in 1880?

V. State the points of difference between the English and Indian law in regard to the offences of cheating and theft or larceny.

VI. In what cases is a breach of contract of service criminal under the Indian Penal Code?

VII. In what cases and under what circumstances is a person justified under the Indian Penal Code and under the English Criminal law in voluntarily doing an act by reason of threats held out to him, which act would otherwise be criminal?

A, under compulsion of a threat held out by B, who is armed with a sword, that he would instantly kill A's child, joins B in committing highway robbery. Is A guilty or not?

VIII. What duties are cast by the Indian Penal Code on owners or occupiers of lands on which or in respect of which certain offences are committed in which they are in no way concerned as principals or abettors, and how is a breach of these duties dealt with, and what are the offences in respect of which such duties are prescribed?

IX. State, giving reasons, what offence if any, is committed in each of the undermentioned cases.—

(a) At a revenue sale by auction the defaulter causes one of his servants to compete with other bidders and to bid the highest amount without any intention of

paying the full amount of purchase-money, the object of the defaulter being, either to prevent a particular bidder from purchasing the property at any rate on that occasion, or to secure a larger number of bidders on the occasion of a resale and thereby the chance of a higher price.

(*b*) A person learning that a warrant has been issued for his arrest, he being either the accused or a witness in a criminal case, absconds with a view to evade the execution of the order for arrest.

(*c*) A person suspects his servant of theft of his watch and promises not to prosecute him if he discloses the truth; the servant thereupon confesses the theft and restores the watch to the master.

(*d*) A witness cited by the plaintiff in a suit obtains Rupees 100 from the plaintiff for his giving true evidence in the cause and refraining from giving false evidence.

(*e*) A person escapes from custody in which he is legally detained for failing to give security for good behaviour.

(*f*) The accused in a criminal case concocts evidence oral and documentary in view to support his defence.

X. Point out the distinctions between the offences of theft, criminal misappropriation, and criminal breach of trust under the Indian Penal Code.

XI. In what cases has a person the right of private defence against an act which act is not an offence, and what is the extent to which the right of private defence of property may be exercised under the Indian Penal Code?

XII. In what cases is mere carelessness a crime under the Indian Penal Code irrespectively of the results which it may produce? What was the defect which existed in respect of this branch of criminal law before the Indian Penal Code was amended, and how has it been rectified by the Amendment Act

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

PROCEDURE.

I. Give the Definitions of "Decree," "Order," and "Decree-holder," contained in the Code of Civil Procedure.

II. State the provisions of that Code on the subject of *res judicata*, and apply them to the following cases:

(*a*) Certain property originally belonging to the husband of the Plaintiff was conveyed by him by deed of gift to his daughter, after her marriage with the Defendant, as her Strithan. After the daughter's death, the Plaintiff brought a suit to recover the property on the ground that the deed of gift was a forgery, and that she was entitled to the property as heiress to her husband. The deed of gift was found genuine and her suit was dismissed. The Plaintiff subsequently sued to recover the same property as heiress to her daughter.

(*b*) The suit was on a bond for Rupees 12,000 and interest in a Court having no pecuniary limit of jurisdiction. The defence was that in a prior suit for Rupees 1,600, balance of interest, brought in a Court having jurisdiction in cases not exceeding Rupees 5,000 in value, the principal sum due on that bond had been decided to be Rupees 4,700.

III. When may a Court which has passed a decree on the application of the decree-holder transfer it for execution to another Court?

IV. What are the rules as to the application of the proceeds of sale of immoveable property sold in execution of a decree ordering the sale for the discharge of an encumbrance thereon?

V. Give accurately the necessary preliminaries to the issue of an attachment of property before judgment.

VI. On what grounds may a review of judgment be granted?

(*a*) A review of judgment is asked for on the ground that the judgment sought to be reviewed had followed the ruling of a Division Bench of the High Court, which ruling was subsequently overruled by a Full Bench.

How would you dispose of this application ?

VII. Under what circumstances may a Police officer break into a dwelling-house in order to effect an arrest ?

VIII. What are the provisions of the Code of Criminal Procedure regarding (*a*) the service of a summons, (*b*) the execution of a warrant, outside the local jurisdiction of the Court issuing such summons or warrant ?

IX. What are the powers entrusted to the Magistracy in cases of disputes regarding easements ?

X. A writes and publishes of B the following, *viz.*, That he (B) is a blackleg and a cheat with whom no honest man should have any dealings. B wishes to prefer a complaint.

(*a*) Give the provisions of the Criminal Procedure Code (i) as to the Court having jurisdiction in such cases: (ii) the method by which the attendance of the accused may be secured: (iii) the procedure to be adopted at the trial by the Magistrate.

(*b*) Draw out a charge in the above case.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

EQUITY.

I. Illustrate what is meant by (1) on equitable mortgage, (2) an equitable lien, (3) an equitable assignment. Are they recognized in the Transfer of Property Act ?

II. State the primary duties of a Trustee. Can he delegate his office, or renounce the trust after he has accepted it ?

III. What is the doctrine of "Notice," and state what constitutes notice according to the Indian Trusts and Transfer of Property Acts.

A, with notice of an incumbrance, purchased an estate for valuable consideration from B, who had purchased without notice. Can A shelter himself under B ? How would it be in the converse case, A, without notice, purchasing from B, with notice ? Give your reasons.

IV. In what cases will a sale be set aside for inadequacy of price ?

A, knowing of a valuable mine on the estate of B, of which he knows B to be ignorant, conceals the fact, and buys the estate from B at the price it is worth without considering the value of the mine. Would Equity interfere on behalf of B?

V. How far is a Trustee liable for a loss arising from his

(*a*) investing trust-money on a second mortgage of immoveable property?

(*b*) delaying to invest trust-money?

(*c*) postponing a sale of trust-property directed to be sold?

(*d*) paying trust-money into his own bankers who fail?

(*e*) acting under the advice of a Solicitor?

A, a trustee, joins with a co-trustee in signing a receipt for trust-money received by the co-trustee, who misappropriates it. Is A liable to make good the amount?

VI. For what purposes may a mortgagee in possession expend money upon the mortgaged estate? What rules are laid down in the Transfer of Property Act regarding the respective rights of the mortgagor and the mortgagee to accessions to the mortgaged property?

VII. What is a Bill of Peace? What answers to it in the law of India? Give an example.

VIII. Give three instances of constructive fraud, each of a different kind.

A, a member of a Hindu family, in ignorance of the law that his self-acquired property is not liable to division, agrees to divide it at a partition of the family property. Is he entitled to relief when he discovers his mistake?

IX. Can specific performance be directed of the following contracts? Give the reasons for your answer in each case.

(*a*) to sing at a theatre for a month.

(*b*) to sell the good-will of a business.

(*c*) to supply vegetables to a hospital.

(*d*) to sell an estate thought to contain 100 acres, but afterwards found to contain only 96 acres.

(*e*) to rent a house for seven years.

(*f*) to sell certain Railway shares

X. What is the general rule in Equity in granting relief against penalties and forfeitures?

Can a contract be specially enforced if a penalty is stipulated for in case of its breach, and the party in default offers to pay the penalty?

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

HINDU AND MUHAMMADAN LAW.

I. Compare the position of the illegitimate son in Hindu, Muhammadan, and English law.

II. Point out the differences between the various schools of Hindu law with regard to (*a*) the widow's power to take a son in adoption, and (*b*) her right to succeed to her husband's property.

III. State in the form of a plaint the allegations which should be made by the divided brother of A, seeking to call in question alienations made by A's widow in her daughter's life-time. Give also the proper prayer for relief in such a case.

IV. A widow may, under certain circumstances, by adopting a son to her deceased husband, divest the estate of one who took on his death.

Explain this proposition, and illustrate it by reference to decided cases.

V. A, a Hindu dies in 1860, leaving an only son B, blind from birth, and two widows the survivor of whom dies in 1865. From this time A's nephew has sole enjoyment of the property until 1885, when a claim is made by a son of B who has just arrived at his majority. What are the relative rights of this son and A's nephew?

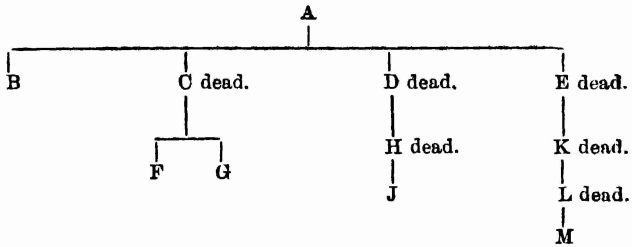
VI. Jewels are given by a mother to her daughter. The daughter marries, and dies leaving her husband and a daughter surviving her. This daughter also marries, and dies, leaving her husband surviving her. Who is entitled to the jewels?

VII. When a member of a Hindu family is entitled to maintenance, how far is such a claim available against property which has been sold by the manager of the family or devised by will to a stranger?

VIII. The widow and daughter of a divided Hindu, being in the enjoyment of his estate, incur debts for its preservation, and die,

leaving them undischarged. They have acquired property out of their savings and also leave an uncollected balance of rents. What claim, if any, have the creditors against the heirs of the Hindu, and against what property can it be enforced ?

IX. A partition has to be made in a family constituted as follows at the time of A's death :—



that is to say, B, F, G, J, and M are then alive. In what manner should the partition be effected ?

Suppose further that A in the foregoing pedigree, having had two sons only, C and E, died, leaving one grandson F and his grandson's grandson M. On the death of F, leaving a widow and a daughter's son only, who would be entitled to the property ?

X. What are the conditions (*a*) of a valid gift, (*b*) of a bequest by will, according to Muhammadan law ?

XI. A Muhammadan dies, leaving a widow, two sons, two daughters, and a grandson by a third son who predeceases, surviving him. How is his property to be divided ?

XII. What is meant by the 'return' ?

Suppose that a widow were, on her husband dying without any other relations, to find his property in the hands of a stranger. What relief could she obtain in a suit brought against that stranger ?

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

GENERAL JURISPRUDENCE.

I. What is Thibaut's conception of a Right, and on what various principles have rights been classified in works on Jurisprudence ?

II. Illustrate the distinction between rights *in rem* and *in personam* by instances of rights arising out of the domestic relations. In what different ways may rights *in personam* be extinguished?

III. State generally the requisites of such a custom as may be regarded as having the force of law.

IV. Explain and illustrate the maxim that in law, the immediate, not the remote, cause is regarded.

V. In what sense may a transaction forbidden by law be said to be void? Does the annexation in a statute of a penalty to a transaction render such transaction void?

VI. What is an obligation? Will a merely natural obligation in any case receive legal recognition?

VII. What is meant by (*a*) confusion, (*b*) concurrence, (*c*) collision of rights? What propositions are laid down by Thibaut regarding the collision of rights equally general, supposing none of them to be specially favoured?

VIII. When is a person said to be in delay? Give, with such illustrations as occur to you, the general consequences of delay.

IX. State and criticise Austin's doctrine of absolute and relative duties.

X. Consider the effects of unsoundness of mind as a ground of non-liability (*a*) in civil matters, (*b*) in matters criminal.

XI. Define Ownership; and enumerate the principal rights incident thereto.

M. L DEGREE EXAMINATION, 1885.

MONDAY, 15TH JANUARY, 10 A.M. TO 1 P.M.

LAW OF EVIDENCE.

I. Would the evidence proffered in the undermentioned cases be admissible under any, and if so what, provisions of the Indian Evidence Act?

(*a*) In a suit between A and B as to the right to possession of a certain field in a village, A produces the curnam's cultivation accounts of several years back to show that his name is entered as the cultivator of the land, and B produces the Munsiff's collection accounts also extending over several years to show that he has been credited with payments of the assessment on the land.

(*b*) A was robbed on the highway, and told B, the first person he met, of the fact, but made no complaint. At the trial of the robbers, A is the chief witness against them. B is called to speak to the statement made to him by A.

(*c*) A sues B to recover damages for a libel. B offers to show that A is himself a libeller by producing decrees obtained by C, D and E, as well as one obtained by himself, against A for libel.

II. Upon what subject is the Duchess of Kingston's a leading case, and how is that subject dealt with in the Indian Evidence Act? Give an instance of an estoppel against an estoppel

III. A, a Sea Customs Officer, is prosecuting certain persons for smuggling which he detected through informers B and C. Can A as a witness in the case decline to answer who gave him the information? B, C, and other persons D, E and F are also witnesses in the case. Each of them is asked in turn if it was he who gave A the information. Discuss the question whether they can be compelled to answer.

IV. Are there any circumstances in which (1) a deposition taken, or (2) a judgment delivered, in a criminal case is admissible as evidence in a civil case?

A prosecutes B for theft. The charge is declared false, and B is acquitted. B then sues A for damages for a malicious prosecution. Could A in defence of the suit attempt to prove that the charge of theft was true?

V. Explain what is meant by the "corpus delicti," illustrating your answer. State a case or two where the "corpus delicti" may be proved by circumstantial evidence.

VI. Enumerate the matters in which the *opinions* of persons are receivable in evidence.

(*a*) A, who is not an expert, offers his opinion founded on his observation of B's behaviour as to B's sanity.

(*b*) A book containing the opinion of an expert who cannot be called as a witness is tendered in evidence.

Would these be admissible in England or in India?

VII. What were the facts and the rulings on points of evidence in the following leading cases?—

Price *v.* Torrington.
Higham *v.* Ridgway.
Didsbury *v.* Thomas.
Dr. Bost *v.* Beresford.

State the corresponding provisions in the Indian Evidence Act.

VIII. Distinguish between contradicting a witness and impeaching the credit of a witness.

A, a witness pretending not to know English in order that he may give his evidence through an interpreter, is asked in cross-examination if he had not just spoken in English to two persons present in Court. He denies the fact. Can those two persons be called to contradict him?

IX. Is an oral *admission* of the contents of a document receivable? Is an admission by a party of his execution of an attested document sufficient proof thereof without calling an attesting witness in a case where the law requires the document to be attested?

Secondary evidence of the contents of a document required by law to be attested is given because the adverse party refuses to produce it after notice. Is it necessary in this case to call an attesting witness to prove its execution, or can the adverse party produce it to show that it was unattested?

X. Point out the differences between the English and Indian law in respect of the admissibility of dying declarations. Would a dying declaration be admissible in this country if made

(*a*) to a Police Officer in the course of an investigation:

(*b*) by a person, who if alive, the Court would have considered incompetent to testify?

XI. How far is the Statute of Frauds applicable in India? Give instances of analogous provisions in Indian law. Can parol evidence be given to prove

(*a*) the confession of an accused person made in the course of a preliminary enquiry, but not recorded at all, or not recorded in due form:

(*b*) the purchase of a property at a Court sale for which a formal sale certificate has been granted:

(*c*) the payment of money for which a stamped receipt has been given.

XII. Is evidence of a contemporaneous oral agreement varying a written contract admissible on behalf of the Plaintiff or Defendant in any case?

MONDAY, 15TH JANUARY, 2 TO 5 P M.

CONTRACTS.

I. Generally a man cannot acquire rights or incur liabilities under a contract to which he is no party. State the several cases forming exceptions from this rule.

II. "A mere voluntary courtesy will not have consideration to uphold an *assumpsit*. But if that courtesy were moved by a suit or request of the party that gives the *assumpsit*, it will bind; for the promise though it follows yet it is not naked but couples itself with the suit before and the merits of the party procured by that suit." Explain this passage naming the source whence it is taken. State the rule as it is expressed in recent English authorities and show in what form it appears in the Contract Act.

III. On the 14th June 1884 the defendant gave the plaintiff a memorandum as follows: "I hereby undertake to sell to you (plaintiff) the house, &c., for Rs. 10,000. This offer is to be left open till the 18th June." On the 16th June the defendant without giving notice to the plaintiff sold the same house to another. On the 17th June the plaintiff gave the defendant notice of acceptance, and afterwards proceeded to sue him for specific performance or damages. How should the case be decided?

IV. Is there any contract in the following cases?—

(*a*) A, the heir of B, promises that, if B will refrain from making a Will, he will make provision for a certain person, and consequently B makes no Will.

(*b*) A and B, husband and wife, being on bad terms agree that, if in six months' time they do not become reconciled, they will separate, the husband making the wife a certain allowance.

(*c*) An ordinary bet is made between A and B on a horse race and lost by B.

(*d*) The master of a ship on some of his crew deserting, promises to give the rest higher pay.

V. Suppose the holder of a decree for Rs. 1,000 with interest and costs, in consideration of the debtor paying down Rs. 500 and the costs immediately and promising to pay the other Rs. 500 by instalments, to undertake not to take proceedings in execution of his decree. Would such an agreement be effectual to prevent the decree holder from executing his decree at any time for the unpaid balance and interest? Compare the English law with the law prevailing here in such cases.

VI. It is a rule of English law that if one party to a contract fails to perform or refuses beforehand to perform a part of the contract which goes to the root of it, the other is excused. Illustrate this rule from decided cases and show how far it is adopted in the Act.

VII. To what extent is a person bound as to third parties by the acts of his general agent when the directions given by him are disregarded by the agent? The master of a ship signs a bill of lading for goods which in fact he has not received on board. Is the shipowner liable in any way to the indorsee, for valuable consideration of such a bill of lading?

VIII. At the request of A and on his offering to guarantee punctual payment of the rent, B grants a lease of a house to C for ten years. Can A afterwards revoke his guarantee, or is it revoked by his death?

IX. Goods are brought by A to an auctioneer for sale in the usual way. Before the sale B gives the auctioneer notice that the goods belong to him and should not be sold. But the auctioneer not believing his claim to be a well-founded one, sells the goods. Has he any defence, and what, to a suit brought by B, and what course can he adopt if he is sued by A also?

X. State the English rules of law as to the degree of care required of bailees, naming the leading case. How far have those rules been qualified by Indian legislation?

XI. It is rule that where there is a chose in action and it is assigned the person who holds the debt on obligation has, as against the assignee, exactly the same equities that he would have, as against the assignor. Explain and illustrate this rule and mention the exceptions from it. To what case besides those of debts does the principle apply?

XII. (i) A, being the holder of an annuity payable during the life-time of X, sells it to B, on the 1st January 1885, both A and B being ignorant that X died on the 31st December 1884.

(ii) A, being the holder of an annuity payable under a deed during the joint life of X and Y, sells it to B after the death of X, both A and B, thinking that the annuity was payable during the lifetime of the survivor of X and Y.

(iii) A, being a shareholder in the Oriental Bank sells his shares to B on the 6th May 1884. The parties being in Mauritius where there is no telegraphic communication were unaware that the Bank had stopped payment on the 5th May.

(iv) A, having a vessel in course of construction agrees to sell it to B for a certain price payable in four instalments as the work progresses. Before the fourth instalment is due, the unfinished vessel is destroyed by fire.

Suppose in each of these cases

(*a*) that A had received the whole purchase-money, or

(*b*) that he had received part of it only,

what would be the relative rights of A and B in eithe event?

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

TORTS AND CRIMINAL LAW.

I. What distinction is made in English law between libe and slander, and how far in your opinion is such distinction founde on sound reasoning and applicable in India?

II. A returning officer whose duty it is to receive the votes o persons entitled to vote at an election of a Municipal Commissioner refuses without malice and in the honest exercise of his judgmen to receive the vote of a person on the mistaken ground that he i not entitled to vote. Is an action maintainable at the suit of suc person against the returning officer.

III. A contracts with B to provide B with a coach. C cor tracts to provide B with a horse and a driver. The driver whil driving the coach, sustains an injury by the coach breaking dow from latent defects in its construction. Is an action maintainabl by the driver against A?

IV. What do you understand by the term "a continuous ease ment," and how are those easements extinguished by non-enjoy ment after they have once been acquired by prescription? Ar they capable of being revived after such extinction, and if so, b what means?

V. Fully explain the doctrine of contributory negligence as defence to an action of tort with special reference to the followin state of circumstances—

(*a*) The plaintiff by going to or remaining at a place wher he ought not to go or remain, sustains damage by a act of the defendant, but for which act the damag would not have been sustained.

(*b*) The plaintiff could have avoided the disaster by th exercise of reasonable care

(c) The defendant might, by the exercise of care on his part, have avoided the consequences of the plaintiff's negligence.

VI. What are the offences for which death is prescribed by the Indian Penal Code as a punishment, and what punishment may the Court award in lieu of death in such cases? Are there any cases in which the Court is bound to pass sentence of death? Are there any offences under the Indian Penal Code for which fine only is prescribed as a punishment?

VII. Two undivided Hindu brothers A and B possessed of ancestral property both moveable and immoveable are jointly tried for an offence jointly committed by them and each fined one thousand rupees. Before any portion of the fine imposed upon A is paid or collected, he dies, leaving a son C. One year afterwards B dies childless, leaving a widow. During B's lifetime a moiety of the fine was collected from him. Can the fines due by A and B at the time of their deaths be realized

(a) if B and C remained undivided after A's death?

(b) if B and C entered into a partition after A's death?

VIII. Write a short note comparing the law of defamation as laid down in the Indian Penal Code with the English law of defamation.

IX. Are there any cases in which the accused can rely upon ignorance of law as entitling him to an acquittal? Illustrate your answer by examples.

X. Explain the principles of Criminal law as to the responsibility attaching to a person for acts done when in a state of intoxication. Compare such principles with those which regulate his civil liability for such acts.

XI. State, giving reasons, whether in each of the following cases any offence is or is not committed under the Indian Penal Code:

(a) A witness in a civil or criminal case learning that a summons is about to issue absconds.

(b) A dacoit for whose arrest no warrant has been issued is harboured and concealed by a person.

(c) A person having probable cause to do so suspects one of his servants of theft of his ring, when in fact the servant is innocent. The master promises not to

prosecute the servant, if he would pay him Rupees 100, being the estimated value of the ring, and the servant thereupon gives the sum demanded.

(*d*) In case (*c*) the servant of his own accord, offers and pays the Rupees 100 in order that he may not be prosecuted.

(*e*) A witness cited by the plaintiff in a case obtains from the defendant Rupees 100 in consideration of his giving false evidence prejudicial to the plaintiff when examined as his witness.

(*f*) The accused in a criminal case when examined by the Magistrate, makes statement which he knows to be false.

XII. Explain fully by illustrations what amounts to an indictable attempt to commit an offence in cases where no express provision is made by the Indian Penal Code for the punishment of such attempt.

TUESDAY, 20TH JANUARY, 2 TO 5 P.M.

HINDU AND MUHAMMADAN LAW.

I. Compare and comment upon the decisions of the different High Courts in regard to the validity or otherwise of the adoption of an only son and of the eldest son.

II. What is the state of the law in regard to the validity of and the consequences of an adoption made by a widow under authority given by her deceased husband, or with the assent of the Sapindas of her husband, such adoption taking place after the death of her son who survived the father?

III. Give a summary of the state of the law according to the decisions of the different High Courts and of the Privy Council in regard to the power of alienation possessed by a member of an undivided family governed by the law of Mitacshara.

N.B.—The answer should refer to alienations by act *inter vivos* voluntary and involuntary and to testamentary dispositions.

IV. State the salient points of difference between the Mitacshara law and the Dayabhaga of Jimutavahana.

V. Compare the law of succession and alienation under the Mitacshara applicable to partible property and that applicable to an ancient impartible Zemindary.

N.B.—The answer should refer to cases of succession by inheritance as well as by survivorship, and to cases of alienation made by one having no coparceners.

VI. What is the position assigned to a sister in the law of inheritance by the Mitacshara, the Dayabhaga of Jimutavahana and the Vyavahara Mayuka respectively?

VII. Discuss the question as to whether or not the law of succession by survivorship applicable to joint family property will govern property devolving on grandsons by daughters or on collateral heirs of the same degree.

VIII. How far is maintenance a charge upon family immoveable property, not only in the hands of a managing member of the family but in the hands of purchasers for value and volunteers claiming under the managing member? Refer to decided cases on the point.

IX. Give a succinct account of the Muhammadan law in regard to the dissolution of the marriage contract.

X. A Muhammadan dies leaving a mother, a wife, and two daughters of his uterine brother. In what proportions will you divide his property among them?

XI. If members of a Muhammadan family choose to live for years after the fashion of an undivided Hindu family without dividing their property or the income therefrom, and a suit for partition should then be brought, some members having in the meantime died, and new acquisitions also having been made by different members of the family, how far will you apply to the suit and on what grounds, the principles applicable to partition suits among Hindus.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

REAL AND PERSONAL PROPERTY.

I. Write short notes on the Statutes—"De donis," "Quia Emptores," Statute of Uses—showing the objects they were intended to serve and the effect which they actually produced.

II. Describe the ordinary modern settlement, pointing out the limit of the power of settlement and giving the history of the rule.

III. A tenant for life entitled to the interest of a sum secured by mortgage, to an annuity payable quarterly, to rents of lands payable half-yearly, and to dividends on Bank shares, dies. To whom should the payments in respect of these several items accruing due after his death be made?

IV. A European dies, having executed a Will whereby after making certain specific and demonstrative legacies, he leaves the residue of his property amounting to Rs. 1,000 to his son. What means is it open to his executors to adopt to pay the debts which exceed Rs. 1,000?

V. A Testator devises an estate to his son in fee, providing that if the son, his heirs, or devisees, or any person claiming through him, shall desire to sell the estate in the life-time of his wife, she shall have the option to purchase the same at the price of £3,000. The estate is in fact worth £10,000. Discuss the question whether the condition is valid.

VI. A transfer of property to take effect at a future time may give a vested or a contingent interest. On what does the difference depend, and what is practically the effect of it?

VII. It has been said that the Transfer of Property Act virtually abolishes optional registration in the case of immoveable property. Explain this dictum.

VIII. You are asked on behalf of an intending purchaser to advise on the title offered in the following cases—

(*a*) The intending vendor purchased the estate two years previously from a Hindu seventeen years of age, the conveyance to him having been executed by the guardian.

(*b*) The intending vendor is a mortgagee, having by the terms of his mortgage a power of sale.

(*c*) The intending vendor is a mortgagee who has bought the property at sale in the execution of a decree on his mortgage, there being however a second mortgagee who was not a party to the suit.

Give an opinion in each case.

IX. The owner of an estate mortgages it with the Bank of which he is himself Secretary. He, having in that capacity custody

of the title-deeds, takes them out and gives a second mortgage to another person. Discuss the question arising between the latter and the Bank.

X. Describe the incidents of the three kinds of tenancies discussed in the notes to Rouse's case, particularly with regard to the amount of interest held by the tenant. Note any difference introduced by the Transfer of Property Act.

XI. What remedy, if any, has the plaintiff in the following cases?—

(*a*) The plaintiff and defendant being owners of adjoining premises on each of which is a well, the defendant fills up his well with refuse the result of which is, that the water in the plaintiff's well is polluted

(*b*) The 1st defendant, not being himself a riparian owner, is permitted by the 2nd defendant, who is a riparian proprietor, to take water by a pipe across the intervening land to his own land, the water being required and used to turn a mill and being returned to the stream at some spot lower down. The plaintiff owns land abutting on the stream below this spot.

(*c*) The defendant, having for a long time suffered the surplus water from his tank to flow into the plaintiff's land who has used it for cultivation, allows his tank to be neglected, and consequently the water ceases to flow to the plaintiff's land.

XII. "When for the more beneficial enjoyment of his own immoveable property a third person has, independently of any interest in the immoveable property of another or of any easement thereon, a right to restrain the enjoyment of the latter property or to compel its enjoyment in a particular way . . . such right may be enforced against a transfer . . of the property affected thereby."

What are the limitations to this rule as laid down in the Transfer of Property Act?

Compare it with the rule deduced from the English cases, naming them.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P.M.

PROCEDURE.

I. State the circumstances under which the rejection of a plaint is imperative. Is an order rejecting a plaint appealable?

II. Draw out (with title) a plaint by a subsequent indorsee against the maker of a promissory note: and state how a summons in a summary suit on such note would differ from an ordinary summons for disposal.

III A Court executing a decree discovers.

(a) That the decree in question, passed in a suit for contribution, was based upon a payment of mesne profits made by the decree-holder in a former suit, the decree in which suit had subsequently been held by the High Court not to include mesne profits.

(b) That the persons who brought the suit, the decree in which is in question, were merely agents without authority to represent the real owner.

(c) That there is reason for supposing that the decree was obtained by fraud.

How should the Court proceed in each of these cases?

IV. Give the provisions of the Code of Civil Procedure as to applications by one or more of joint decree-holders for execution, and as to the orders to be passed thereon.

(a) One of several joint judgment debtors by operation of law acquires the position of decree-holder of the whole judgment debt.

(b) One of several joint judgment debtors similarly acquires a partial interest in the decree.

What is the effect in each case?

V. State the rules regarding the taking out of execution, when there are cross decrees for money.

(a) A obtains a decree against C for Rupees 1,000. C has also a decree against A and B for Rupees 500. Can C set off?

VI Discuss fully the question, whether a regularly perfected attachment is an essential preliminary to a sale in execution of a simple decree for money.

VII. What is the rule regarding the powers of Courts to try offences other than those under the Penal Code where the law defining the offences makes no provision on the subject?

VIII. By whom, under what circumstances, and for what length of time, may security be demanded for keeping the peace, and what are the consequences of default in furnishing such security?

IX. What Magistrates have jurisdiction in cases of public nuisance? Sketch the procedure to be adopted.

X. Mention the exceptions to the rule that for each distinct offence there must be a separate charge, and for every such charge a separate trial.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

EQUITY.

I. What is the difference between

(*a*) the effect of a device upon trust to pay debts, and a devise subject to payment of debt:

(*b*) the construction arising on a receipt signed by several executors and a receipt signed by several trustees

(*c*) the claim to remuneration by an ordinary trustee for his trouble, skill and loss of time, and the same by a constructive trustee?

II. Explain, with an example, the doctrine of *Cypres*. Could a testator's intentions be carried into effect, (1) if he makes a bequest for the purposes of charity, but without particularizing the object, (2) if he mentions a specific object of charity, *viz.*, to build a chuttram at a certain place, and that particular purpose cannot be carried out?

III. When will a Court of Equity enforce a voluntary trust? Cite the leading case on the subject.

IV. Distinguish between "Performance" and "Satisfaction." Give an instance where a legacy would be held to be in satisfaction of a debt, and another, where it would not.

V. A, a minor, is bound as an apprentice to B, an Engineer, for seven years on the payment of a premium of Rs. 5,000. Six months afterwards B becomes bankrupt and his workshops are closed. A, a lessee, on a demise contracts to keep the demised premises in repair. During the term the premises are destroyed by an earthquake.

B, while in the act of making a Will, leaving to A all his property which would otherwise go to C, suddenly dies. Can any relief be obtained by A in these cases? State the principles involved.

VI. What are the leading rules as to "tacking" in reference to mortgages?

A first mortgage is made to secure a loan and *further advances*. If the first mortgagee makes a further advance without notice of a mesne incumbrance will he be entitled to priority in respect of such further advance, (1) in the Madras Presidency, (2) in England?

VII. Define "acquiescence," and discuss it as a defence to (1) breach of trust, (2) breach of contract, (3) fraud.

VIII. (*a*) A, a testator, devises Blackacre to trustees for sale and division of the proceeds among four persons, one of whom dies in A's lifetime. He devises the rest of his real estate to B, and bequeaths his personal estate to C. On the sale of Blackacre, who is entitled to the fourth share of the proceeds? And if the person, who at the death of A, became entitled to that share should afterwards die intestate before the actual receipt of the share, who would take it in that event?

(*b*) A by deed conveys land to trustees upon trust to sell the same and out of the proceeds to pay certain debts due from A. A dies intestate before any sale has taken place. The trustees sell enough of the land to pay debts, but a portion remains unsold. To whom does it belong?

IX. State the meaning and object of discovery, giving some instances where it will not be compelled. In which Act of the Indian Legislature is the subject dealt with, and how?

X. What are the principles of Equity laid down in the following leading cases?

Chestorfield *v.* Jannsen.
Dyer *v.* Dyer.
Basset *v.* Nosworthy.
Seton *v.* Slade.

THURSDAY, 22ND JANUARY, 2 TO 5 P M.

MERCANTILE LAW.

I A policy of insurance is said to be a contract of indemnity. Show how far this is true with regard to marine and life insurance, pointing out the consequences of the principle.

II. What are the defences to an action on a policy of marine insurance—upon which if successful, the underwriter is bound to restore the premium ?

III. Suppose a jettison of goods valued at Rs. 2,000 a consequent loss of freight valued at Rs. 1,500 and average expenditure to the amount of Rs 500 and suppose the estimated value of the ship to be Rs. 5,000, of cargo Rs. 4,000, of freight Rs. 3,000, what would each interest have to contribute ? How are values of ship, freight, and cargo estimated for the purpose of a general average statement ?

IV. What was the point decided in Dixon *v.* Sadler ? Suppose that the facts set out in the plea pleaded in that case had been pleaded in answer to an action brought by one who had shipped goods under a bill of lading containing the ordinary exception "of accidents or damage of the sea" against the ship-owner, would the defence have been a good one ?

V. A cargo of rice was shipped at Rangoon to be delivered to A at Madras, he paying freight. The vessel encountered a cyclone, in consequence of which, part of the cargo had to be thrown overboard, and the rest, being damaged, had to be sold at Port Blair where the vessel put in. Under such circumstance would any freight be due to the ship-owner ? Suppose that part of the cargo in such a case was transhipped and carried on to the port of delivery at an increased rate of freight, on whom should the charge fall ?

VI. Under what conditions can the master of a ship validly hypothecate ship or cargo ?

VII. On what principle does the right of stoppage *in transitu* rest ? How is the right affected by the vendee indorsing the bill of lading as security for an advance of money or by his taking possession of the goods before they have reached the end of the voyage ?

VIII. What was the point decided in Chase *v.* Westmore ? In what ways may a common law lien be lost ?

IX. In what respect does a mercantile custom differ from other customs in respect to the evidence required to prove it ?

X. On what grounds does the Court interfere to protect a person whose trade-mark has been used by another? Name the leading case.

XI. What is required to constitute a fraudulent preference or to bring a transfer within the Statute, 13 Elizabeth, Cap. 5? How far are these questions important under the law prevailing here?

XII. In the course of a voyage from London to Calcutta the ship *Australia* comes into collision in the Red Sea with the *Xerxes* and has to put into Colombo for repairs. In consequence the Master is compelled to execute a bottomry bond on ship and cargo. While going up the river to Calcutta, the ship meets with another disaster and incurs a salvage liability. On arrival proceedings are taken in the admiralty Court by the owners of the *Xerxes*, the holders of the bottomry bond, by the salvors and also by the seamen claiming their wages. In what order should these claims rank against ship and cargo? Suppose it were found that both ships were to blame for the collision, what decree should be made in the collision suit?

FRIDAY, 23RD JANUARY, 10 A M. TO 1 P M.

CONSTITUTIONAL HISTORY.

I. What are the "privileges" of Parliament, and which of them were illustrated in the cases of

George Ferrers.
Arthur Hall.
Francis Goodwin.
John Eliot.

II. To what causes does Hallam assign the high prerogative of the Tudors?

III. Sketch the phases through which the Law of Treason passed from the time of Edward III to that of William III.

IV. Classify, according to Hallam, the various forms of restraint that have been placed upon the religious liberties of the subject in England.

V. What constitutional points were raised in the cases of the following persons:—Edward Hales, Bates, Mompesson, Bushell, and Skinner?

VI. Give the heads of the arguments for and against

(1) the right to levy Ship money in Hampden's case.

(2) the execution of Mary, Queen of Scots.

(3) Septennial Parliaments.

VII. Elaborate this text in Hallam's Middle Ages :—

"It is common indeed to assert that the liberties of England were bought with the blood of our forefathers ..... But it is far more generally accurate to say that they were purchased by money."

VIII. Explain the meaning of the terms—Escuage, Tollage, Heriot, Weregild, View of Frankpledge, Benefit of Clergy, Purveyance, Staple, Undertakers, Prophecyings.

IX. What are the following :—Statute of Winton, Self Denying Ordinance, Statute of Labourers, Book of Sports, Test Act, Statute of Fines, Poyning's Law.

X. State the main articles of Clarendon's impeachment.

XI. Mention the several instances of regencies in English history, and how they arose.

XII. To whom does Hallam allude in the following passages :—

(1) "His fame has brightened in the fire that consumed him."

(2) "The strenuous asserter of liberty on the principles of those ancient laws which no one was admitted to know as well as himself; redeeming in a patriotic old age the faults which we cannot avoid perceiving in his earlier life."

(3) "The nation could not help seeing in his death the sacrifice of the bravest and most renowned of English men to the vengeance of Spain."

(4) "Those commanding qualities of soul, which impressed upon his dark and stern countenance struck his contemporaries with mingled awe and hate, and still live in the unfading colours of Vandyke."

(5) "With this selfish and tyrannical woman that life of exile and privacy which religion and letters would have rendered tolerable to the king, must have been

spent in hardly less bitterness than on a dishonoured throne."

(6) "The deepest stain on his memory is the production of Argyle's private letters on his trial in Scotland."

(7) "He possessed no doubt a powerful, active and undaunted mind, stored with extensive reading on the topics in which he delighted. But having proposed one only object for his political conduct, the establishment of a republic in England, his pride and inflexibility though they gave a dignity to his character, rendered his views narrower and his temper unaccommodating."

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

PUBLIC INTERNATIONAL LAW.

I. What according to Grotius, are the fountains of International Jurisprudence? How is the consent of Nations to its principles evidenced?

II. State and criticize the answers given by Phillimore to the objection that there can be no law between Nations because there is no International Executive capable of enforcing its precepts.

III. Define a State. What is the proper test to determine whether or not a protected State has lost its International existence?

IV. It is said that rights of property exist in certain portions of the sea. Explain and illustrate this statement.

(*a*) What important question regarding maritime territory was decided in the recent case of *Reg.* v. *Keyn* (case of *the Franconia*).

V. Give the exceptions to the rule that a State has absolute power of jurisdiction over all persons within its territorial limits.

VI. Under what circumstances would a State be justified in actively interfering to enforce payments due to its citizens by a foreign State?

VII. Discuss briefly the right of a neutral State to permit the enlistment of troops within its borders for the purposes of a belligerent.

VIII. What important question of International law was involved in what is known as the Affair of Terceira? Review shortly the circumstances out of which it arose.

IX. What properly constitutes a blockade? Define an attempt to force a blockade, and give its penal consequences.

X. Is the purchase, during war, by a neutral, of an enemy's ship legal? State generally what circumstances have been held sufficient to justify the capture of a vessel, professedly neutral, and bringing her in for adjudication.

XI. What is the object for which Prize Courts are commissioned? State the manner in which English Prize Tribunals are set in motion, and sketch in outline the procedure followed by them.

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

PRIVATE INTERNATIONAL LAW.

I. Discuss the principles of international law which regulate the capacity or incapacity of a testator to make a Will of real and personal property.

II. Suppose a marriage takes place in one country, will a divorce obtained in another country for a cause not recognized by the former country be held valid there? Can a Hindu married in India obtain a divorce in England?

III. How far are foreign contracts entered into by a subject or by a foreigner enforced by the Courts of a State when such contracts are not valid according to the laws of that State?

IV. A suit is brought in the District Court of South Arcot on a contract of suretyship entered into at Pondicherry. The surety, the defendant, pleads that the suit is not maintainable, because the creditor, the plaintiff, did not sue the principal debtor, a plea which will prevail in the Pondicherry Courts. How would you decide the case?

V. Are executory contracts respecting immoveable property governed by the law of the place where the contract is made, or by the law of the place where the property is situate?

VI. Discuss the question as to whether an assignment under a foreign bankruptcy law operates as a transfer of personal property in this country.

VII. What are the principal rules of international law in regard to the authority of a foreign guardian over the person and property of a minor?

VIII. Discuss the different views held by jurists in regard to the obligation to give up criminals to the State which desires to prosecute them.

IX. What are the principles which regulate matters of succession to immoveable properties situate in various provinces of India governed by different systems or schools of Hindu law? Is there anything under the Hindu law corresponding to the law of domicil.

X. State the principles of international law governing the status of illegitimate children and the parental power which can be exercised over them and the rights which they can claim at the hands of their parents.

SATURDAY, 24TH JANUARY, 2 TO 5 P.M

ROMAN LAW.

I. Write explanatory notes on the following terms of the Roman Law:—*Persona Manus, Mancipium, Jus naturale, Jus honorarium.*

II. Enumerate the methods by which real rights over particular things might be acquired under Justinian's legislation. What previously existing methods of acquisition were abolished by him?

III. In what cases was it necessary that the Tutor should authorize the acts of his Pupil? State the manner in which that authority should be conveyed, and the occasions on which both Tutor and Pupil were obliged to act jointly.

IV. Define a Servitude. What examples of *prædia urbana* are given in the Institutes? Give the various methods by which servitudes might be created.

V. Give some account of the nature and effects of Adoption under the earlier law of Rome, and show in what respects these were altered by the legislation of Justinian?

VI. What obligations were said to be contracted *re*? What amount of care was obligatory on a gratuitous borrower?

VII. Contrast the provisions of the Roman Law on the subject of warranty with those of the law now prevailing in India. What was the *actio quanti minoris?*

VIII. Explain the nature of the *jus emphyteuticarium.* In what respects was it more extensive than usufruct? Is there any thing analogous to emphyteusis in modern law?

IX. Sketch in outline the history of the Roman Will. What early forms of testaments are mentioned in the Institutes, and why does Justinian speak of the law of Wills as *jus tripartitum?*

X. Give some account of the Roman system of procedure known as the formulary system. What was the *præjudicialis formula?*

XI. Explain the division of actions into those *bonæ fidei*, *stricti juris* and *arbitrariæ.* Enumerate those said to be *bonæ fidei.*

XII. Write a note explaining the nature and incidents of legal possession.

FIRST L. M. S. DEGREE EXAMINATION, 1884.

MONDAY, 7TH JULY, 10 A.M. TO 1 P.M.

CHEMISTRY AND PRACTICAL CHEMISTRY.

I. What is meant by Capillarity? Describe the chief capillary phenomena.

II. Define Specific Heat. Describe one method for determining the specific heat of gases.

III. How much pure zinc and sulphuric acid would be required to make 12 grammes of Hydrogen? What volume would the hydrogen occupy at a pressure of 720 mm. and a temperature of 27°C? *

IV. What is the action of heat on:—

(*a*) Chlorate of potash, (*b*) Sulphur, (*c*) Dilute hydrochloric acid, (*d*) Calcium carbonate.

V. Describe the formation of sulphuric acid from iron pyrites. By what tests would you determine the purity of a specimen of this acid?

VI. How would you distinguish between Tin, Antimony and Arsenic in solution?

VII. Describe the chemical action which takes place in a Daniell's cell.

VIII. How is the atomic weight of an element determined? Illustrate your answer by reference to some one element.

* Zn = 65.

THURSDAY, 10TH JULY, 10 A.M. TO 1 P.M.

PHYSIOLOGY.

I. Describe briefly the minute anatomy and function of the kidney?

II. Name the secretions which are poured into the alimentary tract:—Give their physical properties and chemical composition, and state their various uses.

III. What would result if the 5th cranial nerve were cut across behind the apex of the petrous portion of the temporal bone?

IV. Describe the changes which occur in the circulation at birth.

V. Give an account of the structure of adipose tissue, its distribution in the body, and the purposes it serves in the animal economy.

VI. Classify the various kinds of joints in the human body, giving an instance of, and describing the mechanical properties peculiar to each.

WEDNESDAY, 9TH JULY, 10 A.M. TO 1 P.M.

MATERIA MEDICA AND PHARMACY.

I. To what Natural Order of plants does Ipecacuanha belong? What part is officinal?

What are the medical properties?

Give the various preparations and doses of each.

II. Give the doses and uses of the following medicines:—

Tinct. Aconiti,
Tinct. Digitalis,
Liq. Morphiæ Hydrochloratis,
Liq. Arsenicalis,
Liqr. Strychniæ,

and the proportion of the active ingredients in each of them.

III. What is meant by the term "Incompatibility" as used in Pharmacy? Give a few instances of Incompatibility.

IV. What is Camphor? What are the preparations and therapeutic uses of Camphor? Give the doses of the following:—Hydrargyri Iodidum Rubrum, Ferri Arsenias—Amyl Nitris.

V. How is Phosphorus obtained? Give the composition of the following:—

Pilula Phosphori—Suppositoria Plumbi Composita—Pilula Conii Composita—Pulvis Antimonialis.

VI. Enumerate the preparations of Mercury. How is Black Wash prepared? What are the therapeutic uses of the preparations of Mercury?

TUESDAY, 8TH JULY, 10 A.M. TO 1 P.M.

ANATOMY.

I. Mention what bones the occipital bone articulates with giving the names of the sutures, also its foramina, and the parts transmitted through them.

II. In an amputation through the knee joint mention the parts from before backward which would be cut through.

III. What is the dissection required to expose the triangular ligament, and name the structures found between its layers.

IV. Write a short description of the anatomy of femoral hernia.

V. From whence does the Sciatic nerve take its origin, and what is its distribution?

SECOND L. M. S. DEGREE EXAMINATION, 1884.

MONDAY, 14TH JULY, 10 A.M. TO 1 P.M.

MEDICINE.

I. Give the *stages* of small-pox and measles and describe the successive changes which the eruption, in each case, undergoes, in its full evolution.

II. Give the clinical features of the two forms of true Leprosy.

III. Give the symptoms of Diabetes and its complications. What is the pathology of this affection? Give also the tests by which the presence of sugar is detected in the urine.

IV. Give the symptoms and treatment of Chronic Alcoholism. Describe briefly the morbid changes produced in the body by Chronic Alcoholism.

V. What are the causes, symptoms, complications and sequelæ of Rheumatic Fever?

VI. Enumerate the causes of Cough. Give the symptoms and treatment of Acute Pleurisy.

TUESDAY, 15TH JULY, 10 A.M. TO 1 P.M.

SURGERY AND OPHTHALMOLOGY.

I. Mention the various injuries which produce (1) lengthening, (2) shortening of the lower extremity.

II. What are the usual complications of scalp-wounds and the appropriate treatment in each case?

III. What do you understand by the healing of wounds by the "first intention"? What by the "second intention"? Describe the nature of the process in each case.

IV. What is a Hæmatocele? Under what circumstances may it occur? Give the treatment you would adopt immediately, or in a chronic case.

V. What is the nature of the affection called Ganglion? In what parts does it usually occur, and how would you treat it?

VI. What are the causes, symptoms and treatment of the different forms of Iritis.

WEDNESDAY, 16TH JULY, 10 A.M. TO 1 P.M.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

I. Describe the mechanism of labour with the head presenting in the third position. Follow the labour to its usual and unusual terminations.

II. Describe carefully the treatment of post partum hœmorrhage.

III. Enumerate the signs of the death of the fœtus and discuss the relative importance of each.

IV. State the conditions which call for the operation of version.

WEDNESDAY, 16TH JULY, 2 TO 4 P.M.

MEDICAL JURISPRUDENCE.

I. In a case of alleged assault, what circumstances would point to the wounds having been self-inflicted?

II. Can you decide in all cases where a dead body has been taken out of the water, whether submersion took place during life or after death, and what are your means of diagnosis? Mention the most important and trustworthy external and internal appearances in cases of death by drowning, giving your opinion as to their relative value and trustworthiness.

III. A person is found lying in the road in a state of coma: Under what different circumstances might this condition have arisen? How would you differentiate coma arising under these different circumstances?

THURSDAY, 17TH JULY, 2 TO 4 P M

HYGIENE.

I. How much solid and how much liquid excreta are passed by one individual in 24 hours? In what forms are Carbon, Hydrogen, Nitrogen and Mineral Salts eliminated from the body, and by what channels?

II. Which of the epidemic diseases demand the isolation of patients in Fever Hospitals? State the precautions necessary in convalescence from each disease before the patients are sent back to their homes.

III. Describe briefly how you would examine a sample of water as to its fitness for drinking-purposes.

PRELIMINARY SCIENTIFIC EXAMINATION 1884.

MONDAY, 14TH JULY, 10 A.M. TO 1 P.M.

CHEMISTRY.

I. Describe Gay-Lussac's method for determining the coefficient of expansion of gases, and state the results obtained.

One litre of air is measured off at 0° C. At what temperature is its volume equal to two litres?

II. Define Endosmose and Exosmose and state the conditions necessary for their production.

III. How may the respective quantities of Oxygen, Nitrogen, Aqueous vapour, and Carbonic Acid present in the atmosphere be determined?

IV. How may the Hydrogen compounds of Chlorine and Bromine be prepared, and what are their characteristic properties?

V. What is meant by 'Hard' and 'Soft' waters? Distinguish between 'Temporary' and 'Permanent' hardness in water?

VI. What are the most important ores of Lead, and how may the metal be obtained from them?

VII. Give the formulæ for Sucroses and Glucoses. How is Cane sugar distinguished from Grape sugar, and how may it be converted into the latter?

TUESDAY, 15TH JULY, 10 A.M. TO 1 P.M.

BOTANY.

I. Describe in technical language the plants marked A and B and refer them to their natural orders, giving your reasons.

II. What are the chief characters by which you would recognise a plant as belonging to the natural order *Rubiaceæ* and not to *Apocynaceæ*? Mention some of the more important Indian plants belonging to both orders.

III. Explain the processes which go on during the *respiration* and *assimilation* of a plant.

IV. Show how by the agency of *protoplasm* plant tissue is built up.

V. Describe some of the more peculiar forms of *stipules* which you are acquainted with.

VI. Describe the structure of an ovule just before the flower opens, asserting your description by means of diagrams, if you can.

FIRST M. B. AND C. M. DEGREE EXAMINATION, 1884

MONDAY, 28TH JULY, 10 A.M. TO 1 P.M.

ANATOMY.

I. Name the different parts of the sphenoid bone, the foramina in them, what each foramin transmits; and state the bones with which the sphenoid articulates.

II. Describe the course of the femoral artery, and give its branches.

III. Name the different structures which would be traversed by a needle passed through the centre of the cornea into the sclerotic at the back of the eye.

IV. How is the brachial plexus formed, and what nerves are given off from it?

V. Give the anatomical relations of the kidneys, and name the parts seen on making a section of one.

VI. Describe the knee joint, giving the uses of the different structures in and surrounding it.

TUESDAY, 29TH JULY, 10 A.M. TO 1 P.M.

PHYSIOLOGY.

I. Describe fully the changes effected in food by the following secretions, and give their physical characters and chemical composition:—

a . . . . . Salivary.
b . . . . . Gastric.
c . . . . . Hepatic.
d . . . . . Pancreatic.
e . . . . . Intestinal juice.

II. Give the various functions of the sympathetic system of nerves.

III. Give the structure of nerve cells and fibres. What are the means by which the functions of a nerve can be determined?

IV. Describe a red blood corpuscle. How do the red corpuscles originate, and what is their function?

V. Describe the secreting glands of the skin and mention their uses.

VI. State what you know concerning the "glycogenic function" of the liver and its importance in the animal economy.

WEDNESDAY, 30TH JULY, 10 A.M. TO 1 P.M.

MATERIA MEDICA AND PHARMACY.

I. Enumerate the preparations of Arsenious Acid in the Pharmacopœia. Give their composition, uses and doses.

II. What is Opium? How is it obtained? Give its composition, its medicinal properties, and the proportion of Opium in each of its preparations.

III. Arrange medicinal substances, in common use, under the following heads:—

Anthelmintics; Antiperiodics; Astringents; Diuretics; Narcotics; Styptics; Hæmatinics.

IV. What medicinal plants belong to the order Cinchonaceæ? And what are their several therapeutical properties? Enumerate their more important officinal preparations, and mention their ordinary doses.

V. What are the therapeutic uses of Squills, Ammoniacum, and Silver? What are the pharmacopœial preparations of these drugs, and what the composition and doses of their preparations?

VI. State the therapeutical effects, preparations, and doses, of Digitalis and Colchicum.

THURSDAY, 31ST JULY, 10 A.M. TO 1 P.M.

COMPARATIVE ANATOMY.

I. Describe the neural and hæmal arches of the Epencephalic vertebra of man.

II. Describe the skeleton of one of the Digitigrade Carnivora.

III. Describe the nervous system and the special senses of birds.

IV. Describe the organs of circulation and respiration in fishes

V. Give the life-history of one of the Rhizostomidæ.

SECOND M. B. AND C. M. DEGREE EXAMINATION, 1884.

MONDAY, 21ST JULY, 10 A.M. TO 1 P.M.

MEDICINE AND PATHOLOGY.

I. What is Cirrhosis of the Liver? Give its morbid anatomy and symptoms, and state how you would treat this disease in its various stages.

II. Describe the symptoms and physical signs of the various stages of Pericarditis, and give the treatment also.

III. Describe the symptoms and course of enteric fever, mentioning characters that would distinguish the disease from those which resemble it. Give its treatment and the appearances observed after death.

IV. Give the symptoms of Epilepsy. State what you know of the pathology of this disease. With what diseases may it be confounded?

V. What do you understand by the term Asthma? What are the chief varieties of this disease? Give the etiology, pathology, symptoms and treatment of Bronchial Asthma.

VI. Give the etiology, pathology and symptoms of Ulcer of the stomach. How would you diagnose Chronic Ulcer from Cancer of the stomach?

WEDNESDAY, 23RD JULY, 10 A.M. TO 1 P.M.

SURGERY.

I. How is fracture of the base of the skull usually caused? State and explain the symptoms which are regarded as characteristic of the injury.

II. What are the local signs and constitutional symptoms of suppuration beneath resisting structures? Where is such suppuration likely to occur? Give the treatment.

III. Describe how you would investigate a case of retention of urine in the male, in order to discover its cause.

IV. How do you distinguish between an "Adenoma" and a "Scirrhus" of the female breast, before and after removal by operation?

V. Describe the mode of formation of fistula in ano, and its treatment.

VI. Describe and explain the symptoms of fracture of the spine, with compression of the cord, in the middle dorsal region. How would you treat such a case.

THURSDAY, 24TH JULY, 10 A.M. TO 1 P.M.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

I. What uterine hœmorrhages occur during the last three months of pregnancy? What are their several causes, phenomena, treatment, and prognoses.

II. Enumerate the causes of retention of the placenta, and describe the treatment in each case.

III. Describe the treatment in cases of prolapse of the umbilical cord.

IV. Give the symptoms and diagnosis of pelvic hœmatocele.

V. What vaginal discharges occur in the adult human female? Mention their causes, and describe their microscopic appearances.

VI. Give a clinical description of a case of acute cerebral meningitis occurring in a young child. What treatment would you adopt?

THURSDAY, 24TH JULY, 2 TO 5 P.M.

MEDICAL JURISPRUDENCE.

I. What are the different modes of death by drowning, and how do these contrast with those by hanging and strangling? How would you decide in a particular case of hanging or drowning whether it was one of suicide or homicide?

II. Supposing the dead body of a new born child is taken from a well, how would you decide whether the child was still-born or was

alive when thrown into the water, or whether it had died from other causes before being thrown into the water?

III. What method would you adopt for detecting opium in a case of suspected poisoning by that substance?

IV Take a case of fatal poisoning by Arsenic, and give—

(1) The morbid phenomena which the deceased most probably exhibited during life subsequent to taking the poison.

(2) The morbid appearances most commonly found at the autopsy.

(3) The most common results of chemical analysis of the contents of the stomach.

State at the same time your opinion as to the relative value and trustworthiness of the above three criteria in the determination of the fact of poisoning.

FRIDAY, 25TH JULY, 7 TO 10 A.M.

HYGIENE.

I. What protective measures would you adopt against the introduction and spread of Cholera at a fair or pilgrimage?

II. Name the principal gaseous disinfectants and give the methods of preparing them.

III. If you were in medical charge of a ship carrying emigrants or pilgrims, what measures would you adopt to ensure the preservation of the health of the passengers and crew on board, and what precautionary measures would you advise, should the vessel touch at intermediate ports?

IV. What is the composition of the atmosphere in open spaces away from habitations? What changes take place in air-spaces occupied by men and animals?

V. What is meant by hardness of a water? Give a detailed account of the process by which you would determine it. By what means, and to what extent, may water be softened?

VI. What is the average consumption of Oxygen by a healthy adult? What quantity of air would you allow per bed in sickness? Mention any varieties of disease in which you think ventilation of primary importance.

FRIDAY, 25TH JULY, 2 TO 5 P.M.

OPHTHALMOLOGY.

I. What are the commonest results of neglected and badly treated chronic ophthalmia?

II. Give the causes, symptoms, appearance, and treatment of tranmatic cataract

III. Describe a case of syphilitic iritis and state how you would treat it.

M. D. DEGREE EXAMINATION, 1884.

MONDAY, 7TH JULY, 10 A.M. TO 1 P.M.

SURGERY.

I. Describe the relations of the common carotid arteries in the neck. How is the circulation carried on after one of them has been tied?

II. Describe the symptoms previous to an operation for hernia which would lead you to suspect mortification of a strangulated intestine, and the appearance during an operation which the intestine in such a case would present.

III. Describe the fractures which occur at the lower end of the humerus, and state how they may be distinguished from dislocation.

IV. In a case of hæmaturia describe the method of investigation you would pursue, and the facts or symptoms by which you would be guided, in the diagnosis of its source and cause.

V. What is enchondroma? Describe its characters and mention the structures in which it is developed.

VI. Describe the structure of the different forms of nævus, and their appropriate treatment.

TUESDAY, 8TH JULY, 10 A.M. TO 1 P.M.

MEDICINE AND PATHOLOGY.

I. Give the symptoms of a typical case of cerebro-spinal sclerosis; state what are the anatomical characters of this disease, give its causes, course, prognosis, terminations and treatment and diagnose it from.

(*a*) ——Chorea.

(*b*) ——Paralysis agitans.

(*c*) Mercurial poisoning, with tremors.

II. Draw up *temperature* charts of :—

(1) A case of enteric fever terminating favorably at the end of the third week.

(2) A case of enteric fever terminating in death in the fourth week.

(3) A case of severe quotidian ague.

(4) A case of *remittent* fever (malarial).

(5) A case of abscess of the liver.

(6) A severe case of pneumonia.

III. Write an account of Chyluria which should include reference to climate in which the disease prevails, its symptoms, course, prognosis and treatment. Is there any feature worthy of note in connection with the microscopical examination of the blood and urine? If so, state it fully.

IV. Describe the symptoms of Scurvy. What is known of the etiology and pathology of this disease? Give the post-mortem appearances. What means would you take to prevent the occurrence of Scurvy?

V. Enumerate the different varieties of Bright's disease. Give the symptoms and pathology of each variety.

VI. What are the anatomical changes which occur in Rickets? Enumerate the symptoms of Rickets, and state what you know about the causation of this disease?

WEDNESDAY, 9TH JULY, 2 TO 5 P.M.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN

I. Describe the circulation, and circulating organs, of the human fœtus, at the end of the second and third months of utero gestation.

II. Discuss the pathology of Puerperal Convulsions. Describe the phenomena connected with an attack, and state briefly what treatment may be necessary.

III. State the conditions which justify the induction of premature labour.

IV. Describe shortly the varieties of Ovarian cystic tumours.

V. Describe the symptoms of pelvic inflammation.

VI. What diet would you consider appropriate for an infant from birth until the seventh month, and from the latter period until the end of the first dentition. What substitutes would you suggest for a child deprived of its mother's milk.

THURSDAY, 10TH JULY, 10 A.M. TO 1 P.M.

HYGIENE.

I. Write a description of cow's milk, giving its composition, nutritive value, method of examining a sample, and the articles of diet derived from cow's milk, together with the mode of preparation of these. How does cow's milk differ from human milk?

II. Give the classification of food, and state how much of each class is necessary, daily, to maintain a labouring man in health.

III. Describe the methods for ascertaining the presence of organic matter in water.

IV. What is the significance of Chlorine as a constituent of drinking water?

V. What is, in your opinion, the best method of dealing with sewage of the Town of Madras? Enumerate the difficulties which are likely to arise in carrying out your scheme, and how you would meet them.

VI. Assuming that there is an unusual predominance of cases of tubercular disease in any given district, state the conclusions that may be drawn generally as to its probable causes; and specially indicate those which are likely to affect the adult and the infantile population respectively.

THURSDAY, 10TH JULY, 3 TO 6 P M

COMPARATIVE ANATOMY.

I Describe fully the order Tæniada.

II Describe the respiratory organ of a pulmonate gasteropod.

III. Write a short account of the class Hydrozoa,

IV Describe the organs of circulation and respiration in Cephalopods.

V. Describe the Rhinencephalic vertebra of man.

B. C. E. DEGREE EXAMINATION, 1885.

MONDAY, 19TH JANUARY, 10 A.M. TO 1 P.M.

SURVEYING AND LEVELLING.

I. A base line 52,800 feet long has been measured at an elevation of 3,000 feet above mean sea level; find its proper measure at sea level.

II. Draw a scale of 25·344 inches to a mile subdivided into portions of 100 feet and also 20 metres. What is the representative fraction of this scale?

III. Mention the adjustments temporary and permanent that should be made or tested before using a dumpy level. Explain briefly how to test the accuracy of the permanent adjustments.

IV. What are the advantages of Gale's traverse system?

V. From the observations recorded below make out a traverse table and plot the traverse to a scale of 8 chains to 1 inch.

Station.	Inward Angle.	Distances Chains Links.	Remarks.
	° ′		
A			
B	270 ..11	8 35 =	*Line AB.*
C	61 ..10	9·70	
D	113 ..41	15 98	AB bears 50° 12′ N. E.
E	56...42	13·80	
F	237... 1	4 52	
G	264 . 21	13·05	
H	49. .40	10·58	
I	121... 3	16 10	
J	83 ..18	16 42	
A	182 53	7 81	

VI. When a traverse makes a complete circuit what conditions must be fulfilled?

VII *XA* and *XY* are two straight lines meeting in *A*. *X* is 1,200 feet from *A* and *Y* is 1,600, *XY* = 2,000 feet. Make all the calculations necessary for setting out a curve of 1,000 feet radius which shall touch the two lines. The curve to be set out by tangential angles and chords of 100 feet in length. If the two ends of the curve have a difference in level of 5 feet what would be the gradient between the two ends?

VIII. Determine from the undermentioned data the height of station *B* above station *A*.

Station *A* — Bar. 28 2 inches, Temperature *F*. 36°.
" *B* — " 27 5 " " *F* 28°.

IX. Give short descriptions of the undermentioned instruments and of the method of using them:—

Eidograph.
Proportional Compasses.
Perambulator.

MONDAY, 19TH JANUARY, 2 TO 5 P.M.

SURVEYING AND LEVELLING.

I. Reduce the levels in diagram A and plot the section—Horizontal scale 100 feet = 1 inch. Vertical scale 10 feet = 1 inch.

II. A road is to be formed along the line on which the section is taken;—one end of the road starts from O at a level of 12·50 and has a falling gradient of 1 in 200—the other end begins from 1,000 at a level of 10·00 with a falling gradient of 1 in. 300.—Add columns to the diagram A shewing (1) the level of the formation of road at each point on section, (2) the height of cutting or banking at each point.

III. Pegs have to be put to formation along the gradient of 1 in. 200. The peg at the intersection of the two gradients has been fixed and is found to read 12·10. The level is supposed to be moved only once during the operation, *viz.*, after putting in the peg at (275), when the back sight is found to read 10·00. Give the staff readings on the pegs at the various distances.

IV Plot the Survey from diagram B Scale 100 feet = 1 inch.

The remainder of the afternoon will be devoted to a practical examination in the use of Surveying and Levelling Instruments

DIAGRAM A.

Back Sight		Reduced Levels	Distance.	Remarks.
	6 00	15 00		B M
	7 00		0	
	8 20		100	
	9 10		150	
	10 11		200	
5 00				
	4 30		275	
	3 80		325	
	2 90		400	
8 15				
	10 22		500	
	11·39		550	
	14 41		700	
10 00				
	7 30		800	
	6 21		900	
	4 02		1,000	

DIAGRAM B.

Side of road.	8	130	12 F
	10	90	10 & Side of road.
	12	60	
	10	5	10
B to F		⊙	
	40	282	G
	40	250	
	30	205	
	20	159	F
	16	80	
	13	40	
	12	15	
E to G		⊙	Through F
		185	C
		140	18 ... 28
		90	8 ... 18
		55	9 ... 27
G to C		⊙	
		182	G
		150	... 30 50
		130	... 18 28
		95	... 18 28
		62	× es nullah side
		28	× es nullah side
B to G		0	
38	28	382	B
46	36	340	
41	30	268	
41	30	180	
32	22	70	
I to B		⊙	
		380	B
		325	× es road side.
		280	... 2 45
		180	... 50 70
		100	... 30 50
		50	... 10 30
H to B		⊙	... 10 30
		350	H
		205	I
		208	× es nullah side
		192	× es nullah side
A to H		⊙	Through I to right of line AC
		280	B
		270	× es side of road
	14	80	E
	8	65	
	10	40	
D to B	5	⊙	Through E
River.	5	310	D
	10	290	
	15	250	
	15	200	
	10	100	
	6	70	
	5	50	
A to D	10	⊙	to left of line AC
		728	C
		480	× es road side
		472	B
		458	× es road side
A to C		⊙	through B

TUESDAY, 20TH JANUARY, 10 A.M. TO 1 P.M.

CONSTRUCTIVE ENGINEERING.

I. A channel iron resting on supports 10 feet apart bears a uniform load of 0·2 tons per lineal foot. Find the stress on the outside fibres if the dimensions are:—Base 6″ × 1″; shanks each (outside to outside) 4″ × 1″.

II. Shew graphically the varying shearing stress produced at a section 8 feet from the centre of a girder 80 feet long, as a train weighing 1½ tons per lineal foot comes on the bridge, (two girders) passes over it, and leaves it.

III. Find the stresses that would be produced in the truss described below by a vertical load of 45 lb. per square foot of roofing, *plus* direct loads of 1,000 lb. at A, and 500 lb. each at H and K. Trusses placed 10 feet apart.

Span 48 feet; rise 18 feet; rafters ABCD, AEFG, trisected by bracing; vertical queen posts BH, EK; horizontal tie beam DG, and straining beam BE; struts CH, KF, parallel to the rafters.

IV. What stress would be caused in each part of the truss described in the last question by a normal wind pressure of 35 lb. per square foot of roofing on one side of the roof? Explain the cause of the difficulty which is met with in constructing the stress diagram for the normal load in this instance.

V. A Whipple-Murphy truss, bottom flange 40 feet, top flange 30 feet, height 5 feet, is divided into 8 bays by vertical bars, and has diagonals inclined at 45°. Find the stress on each part due to a dead load of ½ a ton per foot, and a live load of 1 ton per foot. Loads borne on the bottom flange.

VI. Sketch a suitable cross section for the vertical bar which is at 10 feet from the centre of the girder described in the last question and calculate its strength. What is the sectional area required in the flanges at 8 feet from the centre?

VII. Examine graphically the stability of a masonry dam if the maximum depth of the water is 96 feet:—Height of dam 100 feet; width at top 14 feet; batter of inner face 5 feet and of outer face 36 feet in the entire height, thus making the width at base 55 feet.

A cubic foot of water weighs 62½ lb. and a cubic foot of the wall 150 lb. Does this section conform to Rankine's rule regarding the place in which the direction of the resultant should cut the base of the wall?

TUESDAY, 20TH JANUARY, 2 TO 5 P.M.

CONSTRUCTIVE ENGINEERING.

I. Write a short specification for "coursed rubble" masonry for a large bridge.

II. Of what courses should a first class terraced roof consist, and how should they be laid?

III. Sketch one of "Best's centres," and give the dimensions suitable for a 30 feet arch. How soon after an arch is keyed should the centres be slacked, and removed? To what height should the backing be carried before the centres are taken away?

IV. How do masons get at their work when building the arch of a tunnel, and how is the arch keyed?

V. Make a sketch of the top joint of a wrought iron roof truss of 24 feet span, and 9 feet rise, showing the junction of the T iron rafters and the vertical ring rod. Sketch also the bottom joint of a wooden truss of the same size, showing the junction of the rafter and horizontal tie beam.

VI. On what general principles should the various parts of a trussed wooden beam be calculated?

VII. Give a short description of a masonry dam and regulator such as those used on the rivers of Northern India.

VIII. What is considered the maximum safe load for brickwork in the lower part of a high tower? What proportion of base to height is given by Rondelet for enclosure walls, and how is this modified where cross walls exist, and in the case of roofed buildings?

IX. Draw the cross section of a second class road passing round the side of a hill and shew how the drainage should be provided for. Up what gradient can a baggage animal carry only half the load it can carry on level ground?

X. The height of a tank bund is 22 feet; width on top 15 feet; inner slope 1½ to 1; outer slope 3 to 1; maximum depth of water 17 feet. Make a sketch of a sluice capable of discharging 300 cubic feet per minute—stiff clay at level of bed of tank and below.

WEDNESDAY, 21ST JANUARY, 10 A.M. TO 1 P.M.

HYDRAULICS.

I. What would be the discharge in cubic feet per minute from a circular orifice 6″ in diameter with its centre 18′ 9″ below the surface—co-efficient to be taken for a thin plate ?

II. A rectangular orifice 12″ wide and 4″ deep in a thin plate has its centre 4 feet below the surface; the water approaches with a velocity of 55 6 inches per second: find the discharge in cubic feet per second.

III. Water flows down a semicircular channel of 5 feet radius. The surface of the water has a breadth of 5 feet, the channel has a fall of 2 feet per mile. Find what number of gallons would on an average be delivered to each person of a population of 100,000 in 24 hours?

IV. Supposing that 24 gals. per head per day of 24 hours had to be supplied to a population of 200,000 people, what diameter of pipe would be required, the pipe being 2 miles in length and having a head over its lower end of 25 feet?

V. A River rectangular in section 200 feet broad and 10 feet deep has a fall of 8 feet per mile. It is to be spanned by a bridge of four spans, the piers to be 10 feet thick. Find the rise in the surface level which will be caused by the bridge (co-efficient for bridge 1·1).

VI. The maximum rainfall actually drained into a tank from an area of 20 square miles amounts to 6″ in 12 hours. Find what length of calingulah would be required to discharge the maximum hourly fall, if the greatest depth passing over it is limited to 2 feet, and if the tank is assumed to be full.

VII. How many sluices 4 feet square with their centres 16 feet below the surface of the water in rear of the calingulah would discharge the above maximum rainfall (C = 0 82).

VIII. A lock has a lift of 25 feet, the upper sluices have a head of 4 feet, the lower are submerged. What proportion must the area of the upper sluices bear to the lower so that the lock may be filled in the same time that it is emptied?

IX. A cistern 6″ square has an orifice 0·2 inch square situated 12″ below water surface, and it is found that in 3 minutes the water sinks 9 inches. Find the co-efficient of discharge.

X. Show how the following formula is derived :—

$$D = \tfrac{2}{3}\, l \sqrt{2g} \left\{ H \sqrt{H} - h \sqrt{h} \right\}.$$

and applying a co-efficient of contraction ($\frac{2}{3}$), determine the height of 20 openings each 10 feet long which would be required to discharge 1,000 c. ft. per second from a tank whose water level is 10 feet above the bottom sill of the openings.

WEDNESDAY, 21ST JANUARY, 2 TO 5 P M.

ESTIMATING.

I. What rates would you allow for—

Earthwork in ordinary foundations per c. yd.
Concrete in " " "
Teak Timber per c. ft. wrought.
" per ton.
Madras Cement per ton.
Shell Chunam slaked per parah.
Country Brickwork in Mortar per c. yd.
" in Clay per c. yd.

II. Estimate the cost of the materials in 2 lineal yards of a sewer 4 feet internal diameter, having two rings of table brickwork (guaged bricks) bricks 9″ × 4½″ × 3.″ The mortar costs 8 as. per parah. The brickwork is plastered inside and outside with plastering which costs Rs. 5 per square without labour.

III. How many parahs of broken stone would be required to cover 20 squares of road to a thickness of 0·1524 metres?

IV. Find the number of Cubic Yards of masonry in the bridge shewn in the accompanying drawing. Find also the actual number of c. ft. of timber required. Allow for mortice joints, cutting verticals from solid and cutting ends of planking.

THURSDAY, 22ND JANUARY, 10 A.M. TO 1 P.M.

EUCLID AND ALGEBRA.

I. Triangles on the same base, and between the same parallels, are equal.

Construct a triangle equal to and of the same altitude as a given rectilineal figure of six sides.

II. If from any point without a circle there be drawn two straight lines, one of which cuts the circle and the other meets it, and if the rectangle contained by the whole line which cuts the circle and the part of it without the circle be equal to the square on the line which meets the circle, the line which meets the circle shall touch it.

Tangents drawn from the extremities A, B of the diameter of a circle cut a third tangent in the points C and D respectively. If straight lines be drawn from C and D to the centre O, show that the angle COD is a right angle.

III. The sides about the equal angles of triangles which are equiangular to one another are proportionals; and those which are opposite to the equal angles are homologous sides, that is, are the antecedents or the consequents of the ratios.

Two given straight lines AP, BP would, if produced far enough, meet in a point P outside the paper. Shew how to draw a straight line through a given point C, which would pass through P if it could be produced outside the paper.

IV. Draw a straight line perpendicular to a given plane from a given point without it.

V. Solve the equations—

(a) $2x - x^2 + \sqrt{6x^2 - 12x + 7} = 0.$

(b) $x + y + z = \frac{a^2}{x} = \frac{b^2}{y} = \frac{c^2}{z}$

VI. A field redoubt consists of a space enclosed by an earthern parapet which is lined by men and guns. Each gun requires 5 lineal yards of parapet, and the rest of the parapet is occupied by infantry at 1 man per yard. In addition, there is a reserve of infantry amounting to $\frac{2}{3}$ of the garrison A width of 15 ft. inside the parapet is required for the fighting line; and the remaining internal space is the accommodation for men and stores. Each man of the garrison needs at least 15 s ft. of this space, and each gun 600 s. ft.

Find the side of the smallest square redoubt capable of containing three guns, and an infantry garrison, and find the number of the garrison.

VII. A triangular pile of spherical shells has 1, 3, 6, 10, 15 .. shells in successive courses commencing from the top. Find an expression for the total number in a pile of n courses.

VIII. A person who has a fixed life income of Rs 1,000 *per mensem* resolves to set apart a portion of it to purchase a policy of insurance, so that, on his death, the sum paid by the Insurance Company may be sufficient, when invested at 4 per cent., to give his family an income equal to that which he will be enjoying at the time of his demise. If Rs. 3·6 is the annual premium on a policy of Rs. 100, find the amount he must devote annually to insurance.

THURSDAY, 22ND JANUARY, 2 TO 5 P.M.

TRIGONOMETRY AND MENSURATION.

Note. $\pi = 3{\cdot}14159265\ldots$

I. Spiral grooves are cut on the internal surface of the bore of a gun so as to give the projectile rotation. The twist of each groove is such that the groove would travel once round the bore in an axial length of 35 diameters. Determine the angle of twist, *i. e.*, the angle which a groove makes with the axis of the bore, expressing it in degrees, minutes and seconds, and also in circular measure.

II. Considering the earth a sphere of 7,926 miles diameter, find the length of a parallel of latitude passing through Madras in latitude 13°-4′-52″.

III. Desirous of ascertaining the height of a *gopuram*, to the base of which a direct measurement cannot readily be made, I take up a position at noon, and note that the elevation of the summit is 75°, and that the *gopuram* and the extremity of its shadow bear 135° E. and 67½° E respectively. The distance from my position to the end of the shadow is 39¾ ft. Find the height of the *gopuram*, without using tables.

IV. Shew that

$$(a)\quad \tan(a + 30^\circ)\tan a - 30^\circ) = \frac{1 - 2\cos 2a}{1 + 2\cos 2a}$$

$$(b)\quad \tan(a + \beta) = \frac{\sin^2 a - \sin^2 \beta}{\sin a \cos a - \sin \beta \cos \beta}$$

V A quadrilateral piece of ground $ABCD$ whose sides, angles, and area are known, having a road running along one side AB, belongs to two persons in partnership. On the dissolution of the partnership, it is desired to divide the land into two equal portions, each having the same frontage on the road. Shew, without actually making the calculations, how to find a point F in CD so that a straight fence EF, from E the middle point of AB, will fulfil the required condition.

VI. Find an expression for $\cos\frac{A}{2}$ in terms of $\cos A$, and apply it to find the value of $\cos 1^\circ\text{-}52'\text{-}30''$ correct to four places of decimals without using a table of cosines.

VII. Describe a circle having a vertical diameter $AB = d$. Through B draw a horizontal line $CBDE$. Make $CB = \frac{3}{8}d$, $BD = \frac{1}{8}d$, and $DE = 2d$. Join DA, EA. Through C draw CF parallel to DA, meeting EA produced in F. Find the length FE in terms of d, and compare its value with that of the circumference of the circle.

VIII. A bridge 28 feet wide from out to out of the face walls has three semi-elliptic brick arches, each of 40 ft. span and 8 ft. rise. Find the cost of plastering the intradosal surface at Rupees 2-12 per square. $\pi = 3\frac{1}{7}$.

IX. A ring, whose external and internal radii are 11 inches, and 8 inches respectively, is formed by the revolution of the right angled isosceles triangle about an axis parallel to one of its equal sides. Find the volume swept out (taking $\pi = 3\frac{1}{7}$),

(*a*) when the apex of the triangle is next the axis of the ring:

(*b*) when the side of the triangle is next the axis.

X. The formation width of an earthen bank is 21 ft. and its slopes are $1\frac{1}{2}$ to 1. At a certain section the central height is 4 ft., and the cross slope of ground 10 to 1. At a section 200 ft. distant, these quantities are 6 ft. and 15 to 1 respectively. Estimate the area of a mid section, and calculate the volume included between the two end sections.

FRIDAY, 23RD JANUARY, 10 A.M. TO 1 P.M.

ARCHITECTURAL DRAWING.

Make a drawing of an arched bridge to carry a road across a railway cutting. Road on level of ground. cutting 20 feet deep, the bottom 10 feet being rock cut to a slope of ¼ to 1, and the upper 10 feet stiff clay cut to a slope of 1½ to 1. A berm of 3 feet should be left at the level of the top of the rock. The width of the cutting at the bottom is 22 feet, and 21 feet clear must be left between the faces of the abutments. Roadway between parapets 16 feet.

First draw the cross section of the cutting and then design the bridge to suit the place.

FRIDAY, 23RD JANUARY, 2 TO 5 P.M.

TOPOGRAPHICAL DRAWING.

I. A hill, as seen in plan, resembles an ellipse a mile long and half a mile wide, the major axis running north and south. The highest point is 220 yards north, and 110 yards west, of the centre, and is 500 feet above the base. Make a sketch plan, shewing the shape of the hill by means of contour lines, or shading, the slope from summit to base being assumed to be regular.

II. Copy the plan placed before you on a scale of 200 feet to an inch. Complete and colour part of the plan first, and then finish the rest, if time allows.

SATURDAY, 24TH JANUARY, 10 A.M. TO 1 P.M.

STATICS AND DYNAMICS.

NOTE.—*Coefficient of Friction, wood on iron* . ... 0·6
Do. do. iron on iron lubricated... 0 1

I. State the conditions of equilibrium of n forces acting in a plane on a rigid body.

What do these conditions become in the case of a rigid triangular roof frame, one rafter of which sustains two equal forces perpendicular to its direction and applied at its extremities? The weight of the frame to be neglected.

II. Enunciate the *Polygon of Forces.*

A rigid king-post roof frame with free joints is in equilibrium under the action of the uniformly distributed load of the roof covering (which is applied to the principal rafters only at their joints), and the reactions of the abutments. Sketch a system of force polygons from which the tensions and thrusts in the bars may be calculated; and determine from the sketch an expression for the thrust of the strut in terms of the total load W and the pitch α of the roof.

III. The *knuckle joint* consists of two equal bars AB, AC hinged at A, including between them an angle 2θ. The extremities B and C are on a horizontal plane, B being hinged to the plane, and C to a horizontal rod CD constrained to move horizontally. P is a vertical force applied at A, and R is the horizontal resistance in CD. Assuming the principle of virtual velocities, find the relation between P and R. Friction to be neglected.

IV. Shew that if r is the radius of a screw, α the inclination of its thread, ϕ the limiting angle of resistance between screw and nut, and a the length of P's arm,

$$Pa = Wr \tan (\alpha + \phi).$$

A sluice shutter 4 ft. wide, weighing with screw gearing 400 lbs., has 8 ft. of water on it. The shutter works in a groove faced with iron, and the screw gearing is well lubricated. The screw is 2 inches in diameter, $\frac{3}{4}$ inch pitch, and is worked by a spanner 2 ft. long. What force must be applied at the end of the spanner to raise the shutter?

V. If a body be projected either upward or downward with a velocity u, shew that, if v be the velocity acquired and s the space described after time t,

$$2s = (u + v)t.$$

A stone is let fall from the top of a vertical shaft. It is observed that if another stone be let fall one second afterwards from a point 80 ft. lower down, the two stones strike the bottom simultaneously. Neglecting the resistance of the air, estimate the depth of the shaft.

VI. How is force measured (1) independently of the mass moved, (2) taking the mass into account?

A train weighing 120 tons acquires a velocity of 5 miles per hour after travelling for 5 minutes from rest on a straight level road. The resistances being 10 lbs. per ton, estimate the effective propelling force of the engine in lbs.

The investigation of the above question indicates that the velocity increases without limit with the time. Why does it not do so in practice?

VII. Prove that the work expended in drawing a load up the length s of a rough inclined plane is equal to the work required to lift the load through the vertical height h of the plane, *plus* the work required to draw it along the base l, supposing the base to be as rough as the plane.

A ghát railway has a gradient of 1 in 66. A train consists of an engine weighing 36 tons, and eight vehicles averaging 8 tons each. Resistances are 8 lbs. per ton. What must be the *H. P.* of the engine to take the train up at the rate of 12 miles per hour?

VIII. If I be the moment of inertia of an area A about an axis passing through its centre of gravity, and if I_1 be its moment of inertia about a parallel axis distant k from the first, prove that

$$I_1 = I + Ak^2 .$$

If the moment of inertia of a rectangular lamina bd about an axis passing through its centre of gravity and parallel to b is $\frac{1}{12} bd^3$, find the moment of inertia of a channel iron section of the following dimensions about an axis parallel to its head and passing through the centre of gravity of the section. Outside breadth 5″, outside depth 3″, thickness of head and shanks ½″.

SATURDAY, 24TH JANUARY, 2 TO 5 P.M.

HYDROSTATICS AND PNEUMATICS.

I. State the principle of equality of transmitted fluid pressures, and mention some useful applications of the principle.

A brick well for a foundation is to be sunk 20 ft. At 6 ft. from the surface water is met with, and the interior of the well is kept clear by pumping until the full depth is attained. The bottom of the well is then made watertight by a mass of concrete weighing 115 lbs. per c. ft. What is the least depth of concrete which will not be forced up by the water pressure on its under surface?

II Show that the problem of finding the Centre of Pressure of an immersed plane surface can be resolved into that of finding the centre of gravity of a solid. State the nature of, and roughly sketch a perspective view of the solid in each of the following cases:—

(*a*) Vertical rectangle, one side in the surface.

(*b*) Vertical triangle, base in the surface.

(*c*) Vertical circle, to which the surface is a tangent.

III. A temporary foot bridge is to be carried on floating piers, 12 ft. apart, consisting of empty 36 gallon casks (watertight). The superstructure weighs 100 lbs. per ft. run, and the moving load 280 lbs. per ft. run. How many casks will be required per pier so that $\frac{1}{8}$ only of their total buoyancy may be utilised? The timber of the casks is saturated with water, and its specific gravity may be taken as unity.

IV. The inner face of the side wall of an aqueduct carrying 5 ft. of water consists of two planes. The upper one is vertical for a depth of $2\frac{1}{2}$ ft. below the water surface. The lower one meets the bottom of the aqueduct at a horizontal distance of $1\frac{1}{2}$ ft. inside the vertical face. Find, graphically or otherwise, the Centre of Pressure on the side wall, and the direction and amount of the Resultant Pressure. *Scales for graphic solution* 1 *foot to* 1 *inch, and* 200 *lbs. to* 1 *inch.*

V. An iron box 8 ft. long and 2 feet square, weighing 577 lbs., floats in water with its sides vertical and horizontal. The cross section is displaced through an angle of 30°. Find, graphically or otherwise, the moment of stability or instability.

VI. Describe the construction and mode of working of the common suction pump. Explain how it may be modified to raise water more than 34 ft. How may a nearly uniform jet be obtained from a single barrel pump?

VII. State the law of Boyle or Mariotte.

A steam engine has a stroke of 36 inches. Steam is admitted to the cylinder at a pressure of 30 lbs, and cut off at $\frac{1}{3}$ stroke. The condenser has a vacuum of 10 lbs. Find the steam pressures at intervals of 6 inches along the cylinder, and draw a diagram showing the effective pressure on the piston at every point of the stroke.

VIII. Describe the mercurial barometer, and name the two chief uses to which it is put, explaining the principles involved in each case. What is the best practical method of correcting the height of the column for variations of level of the surface of the mercury in the cistern?

IX. A thin hollow cylinder 5 ft. high, closed at the ends, stands upright in a well whose cross sectional area is double that of the cylinder. Sufficient water to just fill the cylinder is poured into the well; and communication with the cylinder, which is full of air, is then opened. At what depths below the top of the cylinder will the water surfaces stand inside and outside of it respectively, if the water barometer stands at 34 ft.?